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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#16
Claims
11-21-02

In re Application of:

Joseph P. STEINER *et al.*

Application No.: 09/873,298

Filed: June 5, 2001

For: ROTAMASE ENZYME ACTIVITY INHIBITORS

Group Art Unit: 1627

Examiner: Bennett M. Celsa

HAND DELIVER TO GROUP 1627
EXAMINER BENNETT M. CELSA

Commissioner for Patents
Washington, DC 20231

Sir:

MEMORANDUM OF AUTHORITIES

Applicants thank Examiner Celsa for his courtesy in providing an opportunity to discuss their application during the interview held on September 25, 2002. To address several legal issues that arose during the interview, Applicants provide this Memorandum of Authorities, which compares the standard for establishing that a party is entitled to the benefit of the filing date of an earlier application for the purpose of priority in an interference with the standard for establishing that a party is entitled to the benefit of the filing date of an earlier application for the purpose of antedating a reference in order to overcome a prior art rejection over that reference. Copies of the cited cases are provided for the Examiner's convenience.

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I. ISSUE

How does the standard for entitlement to benefit of priority based on an earlier-filed application differ with respect to, on the one hand, an interference count and, on the other hand, a prior art reference?

II. SHORT ANSWER

In an interference, a party is entitled to priority based on the filing date of an earlier-filed application if that application satisfies the requirements of 35 U.S.C. § 112, first paragraph, for *a single species* within the scope of the count. In contrast, a party can overcome a rejection under 35 U.S.C. §§ 102 and/or 103 by relying on an earlier-filed application to antedate a reference only if that earlier-filed application satisfies the requirements of 35 U.S.C. § 112, first paragraph, for the *entire scope* of the rejected claim.

III. ANALYSIS

This memo is divided into three sections. The first section discusses the enablement requirement as applied to determining whether a party is entitled to benefit of priority in an interference based on an earlier-filed application. The second section discusses the enablement requirement as applied to determining whether a party is entitled to benefit of priority based on an earlier-filed application for the purpose of antedating a reference during prosecution. The third section discusses how the written description requirement is applied in the context of an interference.

A. Benefit of Priority in an Interference

In each interference, there is at least one count, which defines the interfering subject matter. *See* 37 C.F.R. § 1.601(f). During the interference, a party may prove that it was the first to invent the interfering subject matter by proving, *inter alia*, an actual

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reduction to practice of a single species within the count before an opponent's earliest date for conception.[1] *See Mikus v. Wachtel*, 504 F.2d 1150, 1151, 183 U.S.P.Q. 752, 753 (C.C.P.A. 1974); *Kondo v. Martel*, 220 U.S.P.Q. 47, 50 (Bd. Pat. App. & Interf. 1983) ("It is well settled that the reduction to practice of a single species within the scope of a count constitutes a reduction to practice of the invention defined by the count for the purposes of priority in an interference proceeding."). That is, for the purpose of proving prior invention in an interference, a party is accorded the benefit of the earliest date on which it actually reduced to practice any species within the count. *See Mikus*, at 1151, 183 U.S.P.Q. at 753.

This principle applies equally if a party relies on an earlier-filed application as a constructive reduction to practice for purposes of priority in an interference. *See Den Beste v. Martin*, 252 F.2d 302, 116 U.S.P.Q. 584 (C.C.P.A. 1958). *Den Beste* involved an appeal from an interference proceeding in which Harry Martin, the appellee and senior party, was awarded priority. The count recited a chemical description of hair waving lotion, including a range of final pH values. Martin's application, however, disclosed only a specific pH within the range recited by the count. Den Beste argued that the Board of Patent Interferences ("the Board") erred in awarding priority to Martin based on an earlier-filed application that lacked support for the broad scope of the count.

The court disagreed stating that "the disclosure in an application of a single species of the invention defined in a generic count constituted a constructive reduction

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[1] Of course, depending on the dates established by each party for conception and reduction to practice, other issues, including diligence, may be relevant to the outcome. *Hull v. Davenport*, 90 F.2d 103, 105, 33 U.S.P.Q. 506, 508 (C.C.P.A. 1937).

to practice of the invention defined by the count." *Den Beste*, 252 F.2d at 305, 116 U.S.P.Q. at 586. The *Den Beste* court held that Martin was entitled to the benefit of priority of his earlier-filed application through its disclosure of one example that fully satisfied the requirements of the interference count. *See id.* at 305, 116 U.S.P.Q. at 586-87.

It is recognized that *Den Beste* was clarified and overruled in part by *Squires v. Corbett*, 560 F.2d 424, 194 U.S.P.Q. 513 (C.C.P.A. 1977). However, *Squires* overruled *Den Beste* only to the extent *Den Beste* suggests a party's application-in-interference did not need to support the full scope of a claim presented for interference purposes. *Id.* at 435, 194 U.S.P.Q. at 520. Indeed, in *Squires*, the court expressly noted that a prior reduction to practice of a single species provides a basis for prevailing in an interference directed toward a generic invention. *Id.* at 433, 194 U.S.P.Q. at 519 (stating that *Den Beste* stood for the principle "that proof of a prior constructive reduction to practice of a species would be enough *evidence* to prevail on priority even as to a generic invention.") (emphasis in original).

As explained by the PTO Board of Interferences, in *Mori v. Costain*, 214 USPQ 295, 297 (Bd. Pat. App. & Interf. 1981):

> The *Squires* decision overruled the *Den Beste* principle only as to the involved application for purposes of "right to make" by requiring a party to support in his involved application the full scope of his claim corresponding to the count. However, for purposes of benefit, the *Den Beste* principle still applies [that a single species falling within a genus constitutes a reduction to practice of that genus], is noted [in] *Weil v. Fritz*, 572 F.2d 856, 196 USPQ 600 (CCPA 1978), fn. 16.

In *Mori*, the Board again addressed the requirements for entitlement to priority with respect to an interference count based on an earlier-filed application. The count

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recited a generic chemical formula for gamma lactone derivatives. *Id.* at 296. The Board considered whether Costain, the senior party, was entitled to the benefit of an earlier-filed British application. *Id.* Mori argued that Costain could not rely on the British application because it did "not satisfy the requirements of 35 U.S.C. § 112, first paragraph, for the *full* scope of the count." *Id.* at 297 (emphasis added).

Although Costain's British application disclosed only certain gamma lactones within the scope of the count, the Board held that Costain was entitled to the benefit of priority for the full scope of the broad count as of the filing date of the British application. *Id.* The Board noted that the count was the vehicle for contesting priority of invention and it need not, in fact, be patentable under Costain's prior application.[2] *Id.* Indeed, in an interference, "[a]ll that is necessary for a constructive reduction to practice ('benefit') in an earlier filed application is compliance with 35 USC 122 [sic, 112] with respect to at least one species within the subject matter in issue." *Id.*

A recent, nonprecedential Board opinion, *Furman v. Cheng*, 59 U.S.P.Q.2d 1668 (Bd. Pat. App. & Interf. 2001), confirms that this principle is still good law. *Furman* holds that "a party is entitled to benefit for the purpose of priority if its earlier application describes *an embodiment* within the scope of the count." (emphasis added) *Furman* at 1675, *citing Hunt v. Treppschuh*, 523 F.2d 1386, 1389, 187 U.S.P.Q. 426, 429 (C.C.P.A. 1975). According to *Furman,* "[b]enefit for the purpose of priority in an

[2] Costain's application-in-interference, of course, must support the full scope of the claims designated as corresponding to the count under of section 112, paragraph one. *See Fujikawa v. Wattanasin*, 93 F.3d 1559, 39 U.S.P.Q.2d 1895 (Fed. Cir. 1996). See Section C below for a further discussion of the written description requirement for counts.

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interference declared under 35 U.S.C. § 135 is something different than benefit for the purpose of overcoming prior art." *Furman* at 1670.

B. Benefit of Priority for Antedating a Reference

Unlike establishing benefit of priority to an earlier-filed application with regard to a count in an interference, establishing benefit of priority for the purpose of antedating a reference during prosecution (i.e., in order to overcome a rejection under 35 U.S.C. §§ 102 and/or 103) requires a showing that the earlier-filed application describes and enables the full scope of the claims at issue, as required by section 112, first paragraph. *See, e.g., In re Lukach*, 442 F.2d 967, 169 U.S.P.Q 795 (C.C.P.A. 1971) (holding that, for an applicant to overcome a rejection under 35 U.S.C. § 102(b) by relying on the filing date of an earlier-filed parent U.S. application under 35 U.S.C. § 120, the subject matter claimed in the child must be described in the parent as required by 35 U.S.C. § 112, first paragraph); *In re Gosteli*, 872 F.2d 1008, 10 U.S.P.Q.2d 1614 (Fed. Cir. 1989) (holding that, for an applicant to overcome a rejection under 35 U.S.C. § 102(e) by relying on the filing date of an earlier-filed foreign application under 35 U.S.C. § 119, "the foreign priority application must be examined to ascertain if it supports, within the meaning of section 112, ¶ 1, what is claimed in the United States application.").

C. The Written Description Requirement for Benefit of Priority

The inquiry of whether an application complies with the written description requirement of section 112, first paragraph, may arise twice during an interference: 1) when determining, for purposes of patentability, whether a party's application-in-interference provides written support for the pending claims that are designated as corresponding to the count, *see* 37 CFR 1.603, and 2) when determining, for purposes of priority, whether a party's earlier-filed application provides written support for a

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species within the count, *see Weil v. Fritz*, 572 F.2d 856, 196 U.S.P.Q. 600 n.16 (C.C.P.A. 1978).

1. A Party's Application-in-Interference Must Provide Written Support for Claims Designated As Corresponding to the Count

Before an interference can be declared, the Office must determine that each application (or patent) involved contains at least one claim to the same patentable invention. *See* 37 CFR 1.601(n). Those claims are designated as corresponding to the count and must be supported by each party's respective disclosure, as required by 35 U.S.C. § 112, first paragraph. *See* 37 C.F.R. § 1.603. In other words, the disclosure of a party's application-in-interference must "reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question." *Fujikawa v. Wattanasin,* 93 F.3d 1559, 1570, 39 U.S.P.Q.2d 1895, 1904 (Fed. Cir. 1996).

One of the issues appealed in *Fujikawa* was whether the Board had erred in denying Fujikawa's motion to add a subgenus count to an interference. *See id.* at 1569, 39 U.S.P.Q.2d at 1896. The Board had denied the motion because it found that Wattanasin's disclosure did not provide an adequate written description of Fujikawa's proposed count. *Id.* Although Fujikawa's sub-genus was contained within Wattanasin's genus, the Federal Circuit affirmed the Board's decision, stating "[i]n the absence of [] blazemarks, simply describing a large genus of compounds is not sufficient to satisfy the written description requirement as to particular species or subgenuses." *Id.* at 1571, 39 U.S.P.Q.2d at 1905.

This, of course, is the same standard for written support of a claim that must be satisfied in order to rely on an earlier-filed application during prosecution to overcome a prior art rejection. *See, e.g., In re Edwards*, 568 F.2d 1349, 1352 (C.C.P.A. 1978)

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(stating that a parent application may be used to overcome a rejection under 35 U.S.C. § 102(b) if it "provides adequate direction which reasonably leads persons skilled in the art to the later claimed compound.").

Whether a specification complies with the written description requirement of the first paragraph of section 112 may also arise when an application discloses one or several species, but claims a large genus. The Federal Circuit addressed this issue in *Regents of the Univ. of California v. Eli Lilly and Co.*, 119 F.3d 1559, 43 USPQ2d 1398 (Fed. Cir. 1997). Two of the claims at issue in *Lilly* were drawn to "mammalian" or "vertebrate" insulin cDNA. *Id.* at 1567-68, 43 U.S.P.Q.2d at 1405. The specification, however, disclosed only the sequence of rat insulin cDNA. *Id.* The court acknowledged that, "in claims involving chemical materials, generic formulae usually indicate with specificity what the generic claim encompasses" and "such a formula is normally an adequate description of the claimed genus." *Id.* at 1568, 43 U.S.P.Q.2d at 1406. According to the court, however, "a generic statement such as "vertebrate insulin DNA" or "mammalian insulin DNA," without more, is not an adequate description of the genus because it does not distinguish the claimed genus from others, except by function." *Id.* The court concluded that written support for a claim to genetic material "'requires a precise definition, such as by structure, formula, chemical name, or physical properties,' not a mere wish or plan for obtaining the claimed chemical invention." *Id.* at 1566, 43 U.S.P.Q.2d at 1404.; *but cf. Enzo Biochem, Inc. v. Gen-Probe Inc.*, 296 F.3d 1316, 1325, 63 U.S.P.Q.2d 1609, 1613 (Fed. Cir. 2002) (holding that reference in a specification to the biological deposit of genetic material can satisfy the written description requirement of 35 U.S.C. § 112, first paragraph).

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2. For Benefit of Priority in an Interference, the Parent Application Need Only Provide Written Support for a Species Within the Count

When a party to an interference seeks the benefit of an earlier-filed patent application, that application must satisfy the written description requirement of section 112, first paragraph, for the subject matter of the count. *See, e.g., Hyatt v. Boone*, 146 F.3d 1348, 1352, 47 U.S.P.Q.2d 1128, 1130 (Fed. Cir. 1998). Where the count is drawn to a genus, the party satisfies this requirement for benefit of priority if the earlier-filed application describes any single embodiment within the scope of the count. *See, e.g., Weil,* 572 F.2d 856, 196 U.S.P.Q. 600 n.16 (explaining "'the § 112, first paragraph, requirements need only be met for an embodiment within the count' in the special situation where the count is drawn to a genus and the previously filed application discloses only a species thereof."); *Freerksen v. Gass*, 21 U.S.P.Q.2d 2007, 2009 (Bd. Pat. App. & Interf. 1990). In other words, a party is "in possession of the later-claimed invention" if an earlier-filed application describes "all of the elements and limitations presented in the count" for a single embodiment within the count.

The Board recently applied this principle in *Winter v. Fujita*, 53 U.S.P.Q.2d 1234 (Bd. Pat. App. & Interf. 1999). In *Winter*, the counts in two consolidated interferences recited metallocene compounds according to a generic formula. *Id.* at 1236. The junior parties, Winter and Spaleck, argued that they were entitled to the benefit of two earlier-filed U.S. applications and an earlier-filed German application for the purpose of priority in the interference. *Id.* at 1240. The Board stated: "Winter and Spaleck can succeed if they can demonstrate that [any of the earlier-filed applications] describes a species within the scope of the relevant count." *Id.* at 1246. Because the Board found that the earlier-filed applications failed to describe any species within the generic count, it held

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that Winter and Spaleck were not entitled to benefit of priority. *Id.* The Board explained the rationale for this rule as follows: "[I]f a party describes a single species within the scope of the count, the opposing party is not entitled to a patent covering subject [sic, matter] which is not patentably distinct from the disclosed species." *Id.*, n.17.

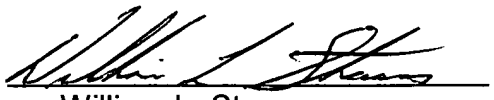
IV. CONCLUSION

An applicant must have full support in the specification of her application-in-interference for any claim advanced to provoke an interference. However, once involved in an interference, a party may establish that she is entitled to the benefit of priority of an earlier-filed application that discloses and enables a single species contained within the genus of the count.

The Examiner is invited to contact the undersigned if he has any questions concerning the foregoing legal discussion or if Applicants can assist the Examiner in any way with respect to advancing the present application.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

By: 

William L. Strauss
Reg. No. 47,114

Date: October 30, 2002

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252 F.2d 302
116 U.S.P.Q. 584
(Cite as: 45 C.C.P.A. 798, 252 F.2d 302)

United States Court of Customs and Patent Appeals.

Marion DEN BESTE, Appellant,
v.
Harry MARTIN, Appellee.

Patent Appeal No. 6326.

Jan. 31, 1958.
Rehearing Denied March 11, 1958.

Patent interference proceeding The Board of Interferences of United States Patent Office awarded priority to senior party, Interference No. 86,622, and junior party appealed. The Court of Customs and Patent Appeals, O'Connell, J., held that application contained sufficient disclosure of one example satisfying requirements of counts in issue and such disclosure constituted constructive reduction to practice of invention dealing with hair-waving lotion as defined by count.

Affirmed.

West Headnotes

[1] Patents k106(3)
291k106(3)

[1] Patents k113(6)
291k113(6)

Affidavit in support of motion filed in patent office for leave to take testimony was not competent evidence and could not properly be considered on appeal in interference proceedings.

[2] Patents k90(1)
291k90(1)

Contention in interference proceeding that count defines a broader concept than is disclosed by senior party's specific example and that accordingly a claim corresponding to count would not be allowable in senior party's application, even assuming it to be true, fact would merely render count unpatentable to senior party and would not deprive him of right to award of priority.

[3] Patents k90(5)
291k90(5)

Disclosure in application of a single species of invention defined in a generic count constitutes a constructive reduction to practice of invention defined by that count, and same principle is applicable to disclosure of single example falling within range set forth in count in interference proceedings.

[4] Patents k90(5)
291k90(5)

If earlier copending application disclosing only one species or example is a constructive reduction to practice of a generic invention, the same is true of application directly involved in interference in containing the same disclosure.

[5] Patents k90(1)
291k90(1)

Question of whether disclosure of an application is broad enough to support a generic claim is one which relates only to patentability of that count in the application and is not ancillary to issue of priority, and in so far as priority is concerned, it is sufficient if application discloses a single species, example or embodiment which clearly meets all requirements of count.

[6] Patents k90(1)
291k90(1)

In interference proceeding, disclosure of a single species or example clearly falling within count constitutes support of all its limitations, so far as issue of priority is concerned.

[7] Patents k90(5)
291k90(5)

If senior party in interference proceeding reduced to practice one example satisfying count before junior party entered field, junior party cannot be first inventor of broad claim embracing that example and if senior party failed to recognize that his example formed part of a broader invention, that fact might

preclude him from obtaining broad claims, but could not constitute junior party first inventor of any claim reading on the said example.

[8] Patents k113(6)
291k113(6)

Whether or not interference should have been dissolved on ground of nonpatentability of count to senior party is a matter which is not ancillary to priority and accordingly cannot be considered on appeal in interference proceeding.

[9] Patents k113(6)
291k113(6)

Jurisdiction of Court of Customs and Patent Appeals in interference cases is limited to priority of invention and questions ancillary thereto.

[10] Patents k91(4)
291k91(4)

Interference proceeding evidence disclosed that senior party's application constituted sufficient disclosure of one example satisfying requirements of count in issue, and that such disclosure constituted constructive reduction to practice of invention respecting hair-waving lotion prior to junior party's entry into field entitling senior party to award of priority.

Patents k113(6)
291k113(6)

In interference proceeding the jurisdiction of United States Court of Customs and Patent Appeals is limited to question of priority of invention and to such ancillary questions as may be involved therein.
**303 *799 Richard Whiting and Sol B. Wiczer, Washington, D.C., for appellant.

Edward B. Beale, Washington, D.C. (George R. Jones, Washington, D.C., for counsel), for appellee.

Before JOHNSON, Chief Judge, and O'CONNELL, WORLEY, and RICH, Judges.

O'CONNELL, Judge.

This is an appeal by Marion Den Beste, the junior party in Interference No. 86,622, from a decision of the Board of Patent Interferences of the United States Patent Office awarding priority to the senior party, Harry Martin. The interference issue consists of a single count, which is as follows:

'A hair waving lotion consisting essentially of an aqueous solution of at least 4% thioglycolic acid, by weight of the solution, the solution having been neutralized to a pH of about 8 with an alkali metal hydroxide to attain the equivalence point for the resulting thioglycolate salt, and having then been brought to a pH in the range of about pH 9 to about pH 10 by the addition of ammonia.'

Martin filed his application No. 276,883, which is involved in the interference, on March 15, 1952 and was accorded the benefit of an earlier application No. 437,628, filed April 4, 1942. Den Beste filed his application No. 64,917, on December 11, 1948, and, in his preliminary statement in the interference alleged no date prior to Martin's record date of April 4, 1942. Accordingly, Den Beste was placed under an order to show cause why judgment on the record should not be entered against him and, in response thereto, moved to dissolve the *800 interference on the ground that the count was not supported by Martin's application No. 276,883. The motion to dissolve was denied by the Primary Examiner and, after final hearing, no testimony having been taken, the Board of Patent Interferences agreed with the Primary Examiner that Martin's application No. 276,883 afforded a proper support for the count, and awarded priority to Martin.

It is agreed by appellant that the disclosures of the two Martin applications are substantially identical, so that if the later one will support the count, the earlier one will also. Accordingly, the sole issue presented here is whether the count is supported by the disclosure of Martin's application No. 276,883.

The invention in issue is a hair waving lotion consisting essentially of an aqueous solution of thioglycolic acid which has been successively treated with an alkali metal hydroxide and with ammonia to bring it to 'a pH in the range of about pH 9 to about pH 10.'

Since Den Beste's right to make the count is not in question, it is unnecessary to consider the disclosure of his application and, in the view which we take of **304 the case, it will be necessary to consider in detail only one example given in the Martin application.

The disclosure primarily relied on by Martin and by the Board of Patent Interferences in support of Martin's right to make the count is the following

example set forth in his application:

'Solutions with a pH of 9.02 have proved the most satisfactory compromise solution for all round use, considering fineness of hair, temperature, time and other considerations of beauty parlor practice. One such solution was

7 grams thioglycolic acid 100 cc water

sodium or potassium hydroxide solution

to make pH 8, then 26 degrees Be aqua ammonia to make pH 9.9, then dilute to 175 cc.'

The specified 7 grams of thioglycolic acid in a solution totaling 175 cc would give exactly 4% of acid if each ingredient had a specific gravity of 1. Appellant argues, that since some of the ingredients of the lotion have specific gravities greater than 1, the acid will form less than 4% by weight of the final lotion. The Board of Patent Interferences, however, pointed out that this would not necessarily be true since the water and the ammonia solution, at room temperature, would have specific gravities less than 1 and might offset the greater weight of the heavier ingredients.

[1] There is no competent evidence of record as to the actual percentage by weight of thioglycolic acid in the lotion above referred to. In support of a motion filed in the Patent Office by appellant for leave to take testimony, an affidavit was filed purporting to show that a percentage of 3.92 was obtained. That affidavit, however, is not ***801** competent evidence and cannot properly be considered here. Methudy v. Roy, 65 F.2d 171, 20 C.C.P.A., Patents, 1142.

Under the circumstances described above, we find no basis for disturbing the holding of the Board of Patent Interferences that the 9.02 pH lotion of Martin's example here under consideration satisfies the requirement of the count as to thioglycolic acid content.

The remaining requirements of the count are clearly satisfied by the quoted example. The neutralization to a pH of 8 is expressly disclosed therein, and it is stated in Den Beste's specification that the pH 8 value is the equivalence point of sodium thioglycolate, which is the salt resulting from the addition of sodium hydroxide to a solution of thioglycolic acid. The final step of bringing the pH value of the lotion to 9.02 by the addition of water is also clearly described in the example.

Appellant contends that 'a pH range of from about 9 to about 10 does not literally read on a pH disclosure of 9.02,' but we are unable to agree with that contention. A claim to a range of values is literally readable on every value falling within the range. It is clear that a pH value of 9.02 would infringe a claim covering a range of from 9 to 10.

[2] For the reasons given we hold that Martin's application No. 276,883 discloses one example which fully satisfies the requirements of the interference count and which would infringe the count if it appeared as a claim of a patent. Den Beste contends, however, that Martin does not disclose the pH range of about 9 to about 10 or the concept of 'at least 4% thioglycolic acid' set forth in the count. That contention is, in effect, that the count defines a broader concept than is disclosed by Martin's specific example and that accordingly a claim corresponding responding to the count would not be allowable in the Martin application. Assuming that to be the case, it would merely render the count unpatentable to Martin, and would not deprive him of the right to an award of priority.

[3] The question as to the effect, in an interference proceeding, of the disclosure in an application of a single species falling within a generic count has been frequently considered by this court. Trumbull v. Kirschbraun, 67 F.2d 974, ****305** 21 C.C.P.A., Patents, 758; Blodgett and Hanson v. Richter, 79 F.2d 922, 23 C.C.P.A., Patents, 749; Walsh v. Davidson, 101 F.2d 224, 26 C.C.P.A., Patents, 812; Kyrides v. Andersen, 121 F.2d 514, 28 C.C.P.A., Patents, 1336; Lawson v. Bruce, 222 F.2d 273, 42 C.C.P.A., Patents, 893. In each of the cited cases it was held that the disclosure in an application of a single species of the invention ***802** defined in a generic count constituted a constructive reduction to practice of the invention defined by that count. The same principle is, of course, applicable to the disclosure of a single example falling within the range set forth in a count.

[4] As pointed out by appellant, some of the cases cited involved situations in which each of the interfering applications contained a generic disclosure, and one party was relying on an earlier copending application disclosing only one species. There is no material difference, however, so far as the question of constructive reduction to practice is concerned, between an application directly involved in an interference and an earlier application relied on by one of the parties. If an earlier copending application disclosing only one species or example is

a constructive reduction to practice of a generic invention, the same is obviously true of an application directly involved in an interference and containing the same disclosure.

[5] As above indicated, we are of the opinion that, as stated in Trumbull v. Kirschbraun, and Blodgett v. Richter, supra, the question as to whether the disclosure of an application is broad enough to support a generic claim is one which relates only to the patentability of that count in the application, and is not ancillary to the issue of priority. So far as priority is concerned, it is sufficient if the application discloses a single species, example or embodiment which clearly meets all the requirements of the count.

[6][7] Appellant argues that the Board of Patent Interferences erred in failing to give effect to 'the law requiring literal and exact support of all limitations of an interference count by the party to whom priority is awarded.' However, the disclosure of a single species or example clearly falling within the count constitutes a support of all its limitations, so far as the issue of priority is concerned. Manifestly, if Martin reduced to practice one example satisfying the count before Den Beste entered the field, Den Beste cannot be the first inventor of a broad claim embracing that example. If Martin failed to recognize that his example formed part of a broader invention, that fact might preclude him from obtaining broad claims, but it could not constitute Den Beste the first inventor of any claim reading on the said example.

Appellant has also assigned error in the board's failure to consider Martin's entire disclosure as refuting any possible claim to inventorship of the interfering subject matter. While the Martin application contains a number of examples which do not fall within the count, and recites several ranges differing from that set forth in the count, it contains nothing which would nullify or modify the disclosure of the specific example discussed above, or which would destroy the effect of ***803** that example as a constructive reduction to practice of the invention here in issue.

[8] The notice of appeal and appellant's brief contain an allegation that the Board of Interference Examiners erred in not reversing the decision of the Primary Examiner denying Den Beste's motion to dissolve. Whether or not the interference should have been dissolved on the ground of nonpatentability of the count to Martin is a matter which is not ancillary to priority and accordingly cannot be considered on this appeal.

[9] For the reasons given, we find it unnecessary to consider whether Martin's application fairly discloses the use of a pH range from 9 to 10 or the use of any percentage of thioglycolic acid in excess of four, as urged in appellant's brief, since those matters relate only to the patentability of the count to Martin. The jurisdiction of this court in interference cases is limited to priority of invention ****306** and questions ancillary thereto. Stern v. Schroeder, 36 F.2d 518, 17 C.C.P.A., Patents, 690; Harris v. Henry, 63 F.2d 120, 20 C.C.P.A., Patents, 883.

[10] We hold that Martin's application No. 276,883 contains a sufficient disclosure of one example satisfying the requirements of the count here in issue, and that such disclosure constitutes a constructive reduction to practice of the invention defined by the count; and since Martin's earlier application No. 437,628, filed April 4, 1942 discloses the same example on which we have relied in connection with application No. 276,883, we further hold that application No. 437,628 constitutes a constructive reduction to practice of the said invention as of April 4, 1942. Since that date is prior to any alleged by Den Beste, priority was properly awarded to Martin.

The decision of the Board of Patent Interferences is affirmed.

***799** Affirmed.

252 F.2d 302, 45 C.C.P.A. 798, 116 U.S.P.Q. 584

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568 F.2d 1349
196 U.S.P.Q. 465
(Cite as: 568 F.2d 1349)

United States Court of Customs and Patent Appeals.

Application of Gayle D. EDWARDS, Doris M. Rice and Robert L. Soulen.

Appeal No. 77-532.

Jan. 12, 1978.
As Amended Jan. 18, 1978.

Appeal was taken from decision of the Patent and Trademark Office which rejected application Serial No. 110,599. The Court of Customs and Patent Appeals, Lane, J., held that under the facts of the case, description, in parent application, of the compound by the process of making the compound was sufficient to meet the description requirement so that a patent issued less than one year before the parent application was filed was removed as a reference.

Reversed.

Miller, J., dissented and filed an opinion.

West Headnotes

[1] Patents k101(5)
291k101(5)

Function of description requirement is to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him; to comply with the description requirement, it is not necessary that the application describe the claimed invention in ipsis verbis; all that is required is that it reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. 35 U.S.C.A. § 112.

[2] Patents k101(11)
291k101(11)

Description in a patent is not intrinsically defective merely because the applicant chose to describe the claimed compound as a process of making it. 35 U.S.C.A. § 112.

[3] Patents k66(1.2)
291k66(1.2)

[3] Patents k101(11)
291k101(11)

Description in parent application of water-insoluble polyol with sufficient self-catalytic activity to react, without the need of extraneous catalysts, with organic polyiscocyanates to form rigid polyurethane foams by the process in which the compound was made was sufficient to meet the description requirement, thus removing as a reference a patent issued less than one year before the parent application was filed. 35 U.S.C.A. §§ 102(b), 112.

***1349** James L. Bailey, Houston, Tex., attorney of record, for appellants.

Joseph F. Nakamura, Washington, D. C., for the Commissioner of Patents, Fred W. Sherling, Washington, D. C., of counsel.

Before MARKEY, Chief Judge, and RICH, BALDWIN, LANE and MILLER, Judges.

LANE, Judge.

This appeal is from the decision of the Patent and Trademark Office (PTO) Board ***1350** of Appeals (board) affirming the final rejection of claim 3, the sole claim in application serial No. 110,599, filed January 28, 1971, entitled "Water Insoluble Nitrogen-Containing Polyols." [FN1] We reverse.

> FN1. The application is a continuation-in-part of parent application serial No. 682,560, filed November 13, 1967, which, in turn, is a continuation-in-part (the examiner had required it to be denominated as such and appellants, while referring to it below as a continuation, have, in their brief before us, referred to it as a continuation-in-part) of grandparent application serial No. 288,474, filed June 17, 1963.

The Invention

Appellants' invention is directed to a water-insoluble

polyol (a poly-hydroxyl compound) which has sufficient self-catalytic activity to react, without the need of extraneous catalysts, with organic polyisocyanates to form rigid polyurethane foams. It is asserted that the foams produced from the polyols of the present invention are characterized by greater ease of fire retardancy and good dimensional strength when extraneous fire retardants are employed. Claim 3, the sole claim on appeal, reads as follows:

3. A water-insoluble polyol having the property of self-catalyzing reaction with organic polyisocyanates to form rigid polyurethane foam said polyol having the formula

Image 1 (1.25□ X 2.75□) Available for Offline Print

As will become evident below, it is essential that the two reactions required to produce the claimed polyol be described. In the first reaction, which can generally be described as a Mannich reaction,[FN2] para-nonylphenol, diethanolamine, and formaldehyde are reacted in a molar ratio of 1:2:2; the predominant component of the resulting MRP will be a pentol (a compound with five hydroxyl groups). The second reaction, which appellants denominate as a propoxylation reaction, involves reacting propylene oxide with the MRP in a molar ratio of 3:1. The predominant product of this reaction will be the claimed compound, viz., a pentol with three degrees of propoxylation.[FN3]

> FN2. The Mannich reaction can be generalized as the linking of a carbanion site (enolate or phenolate) with an aldehyde and an amine. The following is the general reaction scheme:
> Hereinafter, the product of this reaction will generally be referred to as the MRP (Mannich reaction product).
>
> FN3. The product will, in reality, be a mixture of polyols each having various degrees of propoxylation; the predominant component will, however, be the claimed polyol.

Prosecution History and the Rejection

The examiner finally rejected claim 3 on three separate grounds: (1) under 35 U.S.C. s 112, second paragraph, as being indefinite; (2) under 35 U.S.C. s 103, as being obvious over Bruson et al., U.S. Patent No. 2,998,452, issued August 29, 1961; and (3) under 35 U.S.C. s 102(b), as being anticipated by Edwards et al., U.S. Patent No. 3,297,597, issued January 10, 1967, on an application filed May 23, 1966; the grandparent of this application is serial No. 288,474, filed June 17, 1963, which is the same application from which appellants' application originated (i. e., appellants' grandparent application). With respect to the s 102(b) rejection, the examiner was of the opinion that neither the grandparent nor parent applications provided a written description (35 U.S.C. s 112, first paragraph) of the claimed compound; consequently, appellants' claim that they were entitled to their earlier filing dates under 35 U.S.C. s 120 was denied. By restricting appellants to their actual filing date (January 28, 1971), Edwards et al. (which issued January 10, 1967) constituted a statutory bar.

Image 2 (1.5□ X 2.75□) Available for Offline Print

***1351** The board reversed the first two grounds of rejection but affirmed the s 102(b) rejection. Since the parent application was filed less than one year after the Edwards et al. patent issued, the board correctly concluded that if appellants were entitled to rely on its filing date, Edwards et al. (same inventive entity as appellants) would be removed as a reference under s 102(b). In view of appellants' concession that Edwards et al. did, in fact, disclose the claimed polyol, the sole remaining issue was whether the parent application provided a written description (35 U.S.C. s 112, first paragraph) of the claimed polyol. Concluding that it did not, the board stated:

> (T)here is no description in said parent of the invention claimed in the present case. The only disclosure of nonyl phenol (required by claim 3 as the phenolic component) appears . . . with about twenty-five other phenols. While it might be obvious to combine . . . (this) disclosure . . . and Examples III or VIII, (that is to say) select nonyl phenol out of a list of twenty-five phenols, and then combine with propylene oxide in an amount sufficient to obtain the pentol of claim 3, we cannot agree that such selection and combination is equivalent to a "written description" of the claimed invention.
> We note that a recent line of CCPA cases have significantly tightened up on the application of the "written description" requirement of 35 USC 112, first paragraph; see In re Ruschig, 54 CCPA 1551, 379 F.2d 990, 154 USPQ 118 (1967); Fields et al v. Conover et al, 58 CCPA 1366, 433 (443) F.2d 1386, 170 USPQ 276, 279-80 (1971) and In re Smith, 458 F.2d 1389, 173 USPQ 679, 683 (CCPA 1972). (Emphasis in original.)

Issue

The dispositive issue is whether appellants' parent application, serial No. 682,560, filed November 13, 1967, complies with the written description requirement of 35 U.S.C. s 112, first paragraph, vis-a-vis the subject matter of the appealed claim; if it does, then the claim is entitled to the filing date of the parent application under 35 U.S.C. s 120, In re Smith, 458 F.2d 1389, 59 CCPA 1025, 173 USPQ 679 (CCPA 1972), and Edwards et al. is removed as a reference.

OPINION

While appellants argue that both the parent and grandparent applications provide an adequate written description of the claimed compound, in our view it is unnecessary to decide whether the grandparent application complies with the description requirement. Appellants filed their parent application within one year of the effective date (issue date) of the only reference their own patent, and, as such, are within the one-year grace period allowed by s 102(b). Cf. In re Gibbs, 437 F.2d 486, 58 CCPA 901, 168 USPQ 578 (1971).

Turning to the parent application, appellants assert that it, by virtue of providing an adequate written description of the aforementioned reactions, provides an adequate written description of the claimed polyol. That these reactions will produce, as the predominant product, the claimed polyol, is not in dispute. The board, however, took the position that the parent does not provide an adequate description of the two reactions; specifically, that it provides neither direction for selecting, as the phenolic reactant, para-nonylphenol, nor direction for choosing a propylene oxide/MRP molar ratio of 3:1.

[1] The function of the description requirement is to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him. E. g., In re Blaser, 556 F.2d 534, 194 USPQ 122 (CCPA 1977); In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); In re Smith & Hubin, 481 F.2d 910, 178 USPQ 620 (CCPA 1973). To comply with the description requirement it is not necessary that the application describe the claimed invention in ipsis ***1352** verbis, In re Lukach, 442 F.2d 967, 58 CCPA 1233, 169 USPQ 795 (1971); all that is required is that it reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. See In re Driscoll, 562 F.2d 1245, 195 USPQ 434 (CCPA 1977). In the context of the present case, this translates into whether the parent application provides adequate direction which reasonably leads persons skilled in the art to the later claimed compound. See Flynn v. Eardley, 479 F.2d 1393, 178 USPQ 288 (CCPA 1973). By the very nature of this inquiry, each case turns on its own specific facts. See In re Driscoll, supra.

[2][3] As the board apparently recognized, the description in the parent is not intrinsically defective merely because appellants chose to describe their claimed compound by the process of making it; our primary concern is whether the description requirement has been complied with, not the mode selected for compliance. Cf. In re Smith & Hubin, 481 F.2d at 914, 178 USPQ at 624. It is undisputed that the aforementioned reactions will inherently produce, as the predominant component, the claimed compound. Further, the parent discloses that:

> Although it is within the scope of the present invention to separate the crude (MRP) by conventional means into specific components or fractions, it is a feature of the present invention that the entire crude Mannich reaction product may be used as such without attempting to isolate the individual components thereof. (Emphasis added.)

The parent application, therefore, recognizes that, if desired, conventional means can be used to separate components of the MRP and, ostensibly, of the final product. While it is true, as stated in the dissenting opinion, that in the preferred embodiment the parent does not separate the components, this does not negate the express disclosure that such separation is "within the scope" of the parent invention; if such express language does not evidence "possession," then nothing does. Thus, on the facts of this case, an adequate description of the aforementioned reactions is, concomitantly, an adequate description of the claimed compound. This should not be construed as meaning that if an application adequately describes a process which, inherently, will produce a compound, then it necessarily adequately describes the compound: Each case must be decided on its own facts.

Example III, referred to by the board, discloses reacting phenol, diethanolamine, and formaldehyde in a molar ratio of 1:2:2; propylene oxide is then reacted with the resulting MRP in a molar ratio of 4.01:1. With respect to example III, we have noted that in their briefs, both appellants and the solicitor indicate

that example III uses 3.6 moles of propylene oxide per mole of MRP; this is incorrect. Example III reacts 21.7 moles of propylene oxide with 5.41 moles of MRP, thus giving a molar ratio of 4.01:1. Original claim 2 of the parent application, which is part of the original disclosure, In re Gardner, 475 F.2d 1389, 177 USPQ 396, rehearing denied, 480 F.2d 879, 178 USPQ 149 (CCPA 1973), and to which the board made no reference, claims a polyol produced by reacting 1-7 moles of propylene oxide with one mole of the MRP of phenol or nonylphenol, an alkanolamine, and formaldehyde, reacted in a molar ratio of from 1:1:1 to about 1:3:3. The alkanolamine is selected from alkanolamines having the formulae:

Image 3 (0.75□ X 2.75□) Available for Offline Print

where R is hydrogen or C 1-C 4 alkyl, R' is hydrogen, C 1-C 4 alkyl or -(CHR) n-OH, and n is a positive integer having a value of 2 to 5. Diethanolamine is a species which falls within these generic formulae. Moreover, of the eight working examples in the parent which describe making various polyols, all eight use diethanolamine as a reactant. This provides adequate direction for selecting diethanolamine as the alkanolamine in claim 2. Thus, claim 2 recites a process for producing a genus of compounds which includes both the predominant compound produced ***1353** by example III and the claimed compound. More importantly, by claiming the phenolic reactant as a Markush group consisting of phenol or nonylphenol, it is generally understood that appellants are asserting that these two members are alternatively usable for the purposes of the invention, and therefore, regardless of which is chosen, the resulting compound produced by the overall process will exhibit the disclosed utility. See In re Driscoll, supra; see generally In re Skoll, 523 F.2d 1392, 1397, 187 USPQ 481, 484-85 (CCPA 1975). We view this as providing adequate direction for those skilled in the art to substitute nonylphenol for phenol in example III. The solicitor concedes as much in his brief; to conclude otherwise would make the statement in In re Lukach, 442 F.2d at 969, 58 CCPA at 1235, 169 USPQ at 796, that "the invention claimed does not have to be described in ipsis verbis in order to satisfy the description requirement of s 112," meaningless.

Turning to the propylene oxide/MRP mole ratio in the second reaction, the solicitor's position is that, at best, the parent application describes the use of from 1 to 5 moles of propylene oxide per mole of MRP, and that "there is no specific teaching of . . . reducing the amount of propylene oxide to exactly 3 moles as required by the claimed compound." At oral argument, appellants asserted that while a propylene oxide/MRP molar ratio of 3 would, of course, produce the claimed compound, a somewhat larger ratio, such as the 3.6 used in example III, would also produce the claimed compound. As was previously shown, example III does not disclose the use of a molar ratio of 3.6. Moreover, in their brief before us, appellants stated that a molar ratio of 3 is required to produce the claimed compound. Therefore, for purposes of this appeal, we will assume that exactly 3 moles of propylene oxide per mole of MRP is required to produce the compound of appealed claim 3 (the board, in reversing the s 103 rejection over Bruson et al., and the solicitor also stated that 3 moles is required).

To determine whether the parent application provides adequate direction for using the required propylene oxide/MRP molar ratio, an understanding of the underlying reactions is essential. Broadly stated, the parent application discloses first reacting a phenolic compound with an alkanolamine and formaldehyde, in molar ratios of from 1:1:1 to about 1:3:3, to produce an MRP. The resulting MRP potentially can contain three different types of reactive positions: phenolic hydroxyl group, free amino hydrogen atom, and primary hydroxyl group. In the second reaction, alkylene oxide (propylene oxide is disclosed as being preferred) will react with any of these three positions. The molar ratio used in the first reaction will determine whether the MRP is a triol, pentol, etc.; the molar ratio used in the second reaction will determine the degrees of propoxylation of the final product.

Applying this to example III, since the first reaction uses a molar ratio of 1:2:2 (phenol: diethanolamine: formaldehyde), the predominant MRP and the predominant final compound, like the claimed compound, will be a pentol; however, since example III uses a propylene oxide/MRP molar ratio of 4.01:1, the pentol will have four degrees of propoxylation, whereas the claimed pentol has three degrees of propoxylation. With respect to the degree of propoxylation, the parent application discloses that:

> In accordance with the present invention, the Mannich reaction product is reacted with an alkylene oxide to provide the final polyol. The nitrogen present in the Mannich condensate (MRP) has sufficient catalytic activity to promote the reaction of one mol of the alkylene oxide with each free amino hydrogen atom and phenolic and primary hydroxyl group and no additional catalyst

is needed For example seven mols (the stoichiometric amount) of propylene oxide will add to the Mannich product prepared from a molar ratio of 1:3:3 of phenol, diethanolamine and formaldehyde to give a heptol

* * *

***1354** It is, of course, possible to add less than one mol of alkylene oxide per free phenolic and primary hydroxyl group in the Mannich condensation product. The minimum desirable amount of alkylene oxide is one mol per free amino hydrogen atom and phenolic hydroxyl group Generally, more than the minimum amount of alkylene oxide is used to obtain a product having a lower hydorxyl (sic, hydroxyl) number and lower viscosity. For example, a desirable product is that obtained by the addition of five mols of propylene oxide (rather than the maximum of seven or minimum of one) to the heptol obtained by the Mannich condensation of phenol, formaldehyde and diethanolamine in a molar ratio of 1:3:3. (Emphasis added.)

The first reaction in example III, as well as the first reaction required to produce the polyol of appealed claim 3, will produce, as the predominant MRP, a compound which has one phenolic hydroxyl group, no free amino hydrogen atoms, and four primary hydroxyl groups. With this in mind, we believe the above quoted disclosure will provide those skilled in the art with adequate direction for concluding that, in example III, from 1 (but preferably more than 1) to 5 moles of propylene oxide can be reacted with each mole of MRP and that, most importantly, the polyol produced will have the disclosed utility ; ergo, it provides adequate direction for using three moles of propylene oxide in example III.

When viewed in the context of what the parent application actually describes, the PTO has, in effect, done nothing more than argue lack of literal support. The burden of showing that the claimed invention is not described in the application rests on the PTO in the first instance, and it is up to the PTO to give reasons why a description not in ipsis verbis is insufficient. In re Salem, 553 F.2d 676, 682, 193 U.S.P.Q. 513, 518 (CCPA 1977); In re Wertheim, 541 F.2d at 265, 191 U.S.P.Q. at 98. Stating, as the board did, that in a recent line of cases this court has "significantly tightened up" on the written description requirement, is no substitute for such reasons. Parenthetically, with respect to the board's perception of this court's past cases, suffice it to say that each case must be decided on its own facts, see, e. g., In re Driscoll, supra, and that precedential value of prior cases is, therefore, extremely limited.

In conclusion, we hold that, as a factual matter, the parent application, taken as a whole, reasonably leads persons skilled in the art to the reaction of para-nonylphenol, diethanolamine, and formaldehyde, in a molar ratio of 1:2:2, and to the reaction of propylene oxide with the resulting MRP, in a molar ratio of 3:1, and, concomitantly, to the claimed compound. Accordingly, since claim 3 is therefore entitled to the benefit of the filing date of the parent application, we reverse the s 102(b) rejection of this claim.

REVERSED.

MILLER, Judge, dissenting.

As the majority opinion recognizes, the function of the description of the invention requirement of 35 U.S.C. s 112, first paragraph, is to insure that an inventor had possession of the claimed subject matter as of the filing date of his application.

Appellants' parent application states that their invention involves "a new class of polyols"; also, it teaches use of the "entire crude Mannich reaction product" ("without attempting to isolate the individual components thereof") as the preferred embodiment of the invention in the further reaction with alkylene oxide to form polyol compounds within that class. From this disclosure, I am persuaded that one skilled in the art would conclude that appellants were not concerned with any specific polyol compound. Indeed, practice of the preferred embodiment of the invention would yield mixtures of polyol compounds.[FN1] (This does not ignore the statement in appellants' parent application that it is within the scope of the invention to separate the crude ***1355** reaction product. However, merely being "within the scope of the present invention" provides no guidance to convey clearly to one skilled in the art that appellants were in possession of the presently claimed subject matter; whereas, a preferred embodiment is a reliable guide, as the majority opinion appears to acknowledge.)

> FN1. It should be noted that claim 1 (also dependent claim 2), for example, recites "polyol." However, the claims actually are to polyol compounds.

I do not see how the majority can properly conclude that, "on the facts of this case, an adequate

description of the . . . reactions (Mannich reaction and further reaction with alkylene oxide) is, concomitantly, an adequate description of the claimed compound," considering that the preferred embodiment in the parent application would yield an almost infinite number of different mixtures of polyol compounds. At best,[FN2] one of ordinary skill in the art, looking at the parent's claim 2 and example III on which the majority relies, would only be guided to a mixture of polyol compounds not to the specific claimed polyol compound.[FN3] Nor can I accept the majority's conclusion that disclosure of from 1 to 5 moles "provides adequate direction (to one skilled in the art) for using three moles of propylene oxide in example III." There is nothing in appellants' parent application that would lead one to select 3 moles, rather than 1, 2, 4, 5, or the fractions thereof. The majority's assertion that "we will assume that exactly 3 moles of propylene oxide per mole of MRP is required to produce the compound of appealed claim 3" has no evidentiary support in the record.[FN4]

> FN2. Also noteworthy is the lack of direction (to one skilled in the art) of how to select the correct phenolic compound as an initial reactant. Appellants have admitted that some experimentation would be involved. Thus, although the enablement requirement of 35 USC 112 might be satisfied, the description of the invention requirement is not. In re DiLeone, 436 F.2d 1404, 58 CCPA 925, 168 USPQ 592 (1971).
>
> FN3. The majority improperly assumes that one skilled in the art would find appellants' parent application directed to individual polyol compounds and that, therefore, a disclosure of a range of from 1 to 5 moles of alkylene oxide reactant would result in the formation of only five compounds. This ignores the fact that the preferred embodiment of the parent application calls for the entire crude Mannich reaction product which, upon further reaction with alkylene oxide, would yield an almost infinite number of different mixtures of polyol compounds.
>
> FN4. Although the Solicitor appears to admit that reaction of 3 moles of propylene oxide with the appropriate Mannich reaction product will yield the claimed compound, neither the examiner nor the board did so, and no disclosure in appellants' parent application supports such a conclusion. The board, in discussing the issue of appellants' claim to the benefit of section 120 (and appellants' satisfaction of the requirement of section 112), referred to combining propylene oxide "in an amount sufficient to obtain the pentol of claim 3," and the examiner referred to a product containing 3 moles of propylene oxide.

The majority opinion fails to explain why or how the mere disclosure of a mole range of a reactant that would result in the formation of an almost infinite number of different mixtures of polyol compounds, depending upon the number of moles of reactant chosen, provides an adequate description in this case, while the disclosure of at least 19 possible amine reactants in In re Ruschig, 379 F.2d 990, 54 CCPA 1551, 154 USPQ 118 (1967), and the naming of a number of possible substituents in Flynn v. Eardley, 479 F.2d 1393, 178 USPQ 288 (CCPA 1973), and Fields v. Conover, 443 F.2d 1386, 58 CCPA 1366, 170 USPQ 276 (1971), did not. Absent an explanation, the decision of the board should be affirmed.

568 F.2d 1349, 196 U.S.P.Q. 465
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296 F.3d 1316
63 U.S.P.Q.2d 1609
(Cite as: 296 F.3d 1316)

United States Court of Appeals,
Federal Circuit.

ENZO BIOCHEM, INC., Plaintiff-Appellant,
v.
GEN-PROBE INCORPORATED,
and
Chugai Pharma U.S.A., Inc. and Chugai Pharmaceutical Co., Ltd.,
and
Biomerieux, Inc.,
and
Becton Dickinson and Company,
Defendants-Appellees,
and
Biomerieux SA, Defendant.

No. 01-1230.

DECIDED: July 15, 2002.

Assignee of patent directed to nucleic acid probes that selectively hybridize to genetic material of bacteria that cause gonorrhea brought patent infringement suit against competitors, who moved for summary judgment. The United States District Court for the Southern District of New York, Alvin K. Hellerstein, J., granted motion. Assignee appealed. On grant of petition for rehearing, the Court of Appeals, Lourie, Circuit Judge, held that: (1) patent's reference to deposit in public depository can constitute adequate description of claimed material for purpose of written description requirement; (2) fact issues existed as to whether one skilled in the art would view various subsequences, mutations, and mixtures of deposited sequences as within scope of claims; (3) fact issues existed as to whether deposited sequences were representative of broader genus claims; (4) fact issues existed as to whether claimed sequences were adequately described in terms of function; and (5) specification's indication that assignee possessed claimed invention by reducing it to practice was insufficient alone to meet written description requirement.

Reversed and remanded.

Opinion, 285 F.3d 1013, vacated.

West Headnotes

[1] Patents k112.5
291k112.5

A patent is presumed to be valid, and this presumption can be overcome only by facts supported by clear and convincing evidence to the contrary. 35 U.S.C.A. § 282.

[2] Patents k314(5)
291k314(5)

Compliance with the patent statute's written description requirement is a question of fact. 35 U.S.C.A. § 112.

[3] Patents k99
291k99

Written description requirement of patent statute calls for a written description of an invention separate from enablement. 35 U.S.C.A. § 112.

[4] Patents k99
291k99

Compliance with the patent statute's written description requirement is essentially a fact-based inquiry that will necessarily vary depending on the nature of the invention claimed. 35 U.S.C.A. § 112.

[5] Patents k97
291k97

Regulatory guidelines governing internal practice of Patent and Trademark Office (PTO) for examining patent applications under statutory written description requirement, like the Manual of Patent Examining Procedure (MPEP), are not binding on Court of Appeals, but may be given judicial notice to the extent they do not conflict with the statute. 35 U.S.C.A. § 112.

[6] Patents k99
291k99

Patent statute's written description requirement can be met by showing that an invention is complete by

disclosure of sufficiently detailed, relevant identifying characteristics i.e., complete or partial structure, other physical and/or chemical properties, functional characteristics when coupled with a known or disclosed correlation between function and structure, or some combination of such characteristics. 35 U.S.C.A. § 112.

[7] Patents k99
291k99

Reference in patent specification to deposits of claimed nucleotide sequences in public depository sufficiently described those sequences to the public for purposes of patent statute's written description requirement; a person of skill in the art, reading the accession numbers in the patent specification, could obtain claimed sequences from depository by following the appropriate techniques to excise the nucleotide sequences from the deposited organisms containing those sequences, and, although structures of those sequences were not expressly set forth in the specification, those structures may not have been reasonably obtainable and in any event were not known to patent applicant when application was filed. 35 U.S.C.A. § 112.

[8] Patents k99
291k99

Reference in patent specification to a deposit in a public depository, which makes its contents accessible to the public when it is not otherwise available in written form, constitutes an adequate description of the deposited material sufficient to comply with the patent statute's written description requirement. 35 U.S.C.A. § 112.

[9] Federal Civil Procedure k2508
170Ak2508

Genuine issue of material fact as to whether three claimed nucleotide sequences placed in public depository also described various subsequences, mutations, and mixtures of those sequences, which allegedly also fell within scope of patent claims, to one skilled in the art precluded summary judgment for alleged infringer, who asserted that such substantial breadth of claims would render them invalid under the written description requirement. 35 U.S.C.A. § 112.

[10] Federal Civil Procedure k2508
170Ak2508

Genuine issue of material fact as to whether three claimed nucleotide sequences placed in public depository were representative, to one skilled in the art, of broad genus claims, in patent directed to nucleic acid probes that selectively hybridize to the genetic material of the bacteria that cause gonorrhea, precluded summary judgment for alleged infringer on its claim that genus claims were invalid for failure to meet patent statute's written description requirement. 35 U.S.C.A. § 112.

[11] Federal Civil Procedure k2508
170Ak2508

Genuine issue of material fact as to whether disclosed correlation of their function of hybridization with bacterial DNA strains deposited in public depository described claimed nucleotide sequences, in patent directed to nucleic acid probes that selectively hybridized to genetic material of bacteria that caused gonorrhea, even though DNA structures were not explicitly sequenced, precluded summary judgment for alleged infringer on its claim that patent was invalid for failure to meet the written description requirement. 35 U.S.C.A. § 112.

[12] Patents k99
291k99

Fact that claims of patent directed to nucleic acid probes that selectively hybridize to the genetic material of the bacteria that cause gonorrhea appeared in ipsis verbis in the written description did not automatically satisfy written description requirement of patent statute. 35 U.S.C.A. § 112.

[13] Patents k99
291k99

Even if a patent claim is supported by the specification, the language of the specification, to the extent possible, must describe the claimed invention so that one skilled in the art can recognize what is claimed; the appearance of mere indistinct words in a specification or a claim, even an original claim, does not necessarily satisfy that requirement. 35 U.S.C.A. § 112.

[14] Patents k99
291k99

A description of what a material does, rather than of what it is, usually does not suffice to meet the patent statute's written description requirement; disclosure must allow one skilled in the art to visualize or

recognize the identity of the subject matter purportedly described. 35 U.S.C.A. § 112.

[15] Patents k99
291k99

Where the words of the patent claim alone do not convey an adequate description of the invention, regardless of whether the claim appears in the original specification and is thus supported by the specification as of the filing date, the patent statute's written description requirement is not necessarily met. 35 U.S.C.A. § 112.

[16] Patents k99
291k99

If a purported description of an invention does not meet patent statute's written description requirement, the fact that it appears as an original claim or in the specification does not save it; a claim does not become more descriptive by its repetition, or its longevity. 35 U.S.C.A. § 112.

[17] Patents k99
291k99

Mere fact that specification of patent, which was directed to nucleic acid probes that selectively hybridize to the genetic material of the bacteria that cause gonorrhea, indicated that patent holder possessed claimed invention by reducing to practice three nucleotide sequences within the scope of the patent claims and depositing them in public depository did not establish that patent met the statutory written description requirement. 35 U.S.C.A. § 112.

[18] Patents k99
291k99

While articulation of written description requirement of patent statute in terms of "possession" is useful when a patentee is claiming entitlement to an earlier filing date, in interferences in which the issue is whether a count is supported by the specification of one or more of the parties, and in ex parte applications in which a claim at issue was filed subsequent to the application, application of written description requirement is not subsumed by the "possession" inquiry. 35 U.S.C.A. § 112.

[19] Patents k99
291k99

A showing that the patentee is in "possession" of the claimed invention is ancillary to the statutory mandate of an adequate written description, and that requirement is not met if, despite a showing of possession, the specification does not adequately describe the claimed invention. 35 U.S.C.A. § 112.

[20] Patents k99
291k99

Although one can show possession of an invention by means of an affidavit or declaration during prosecution, as one does in an interference or when one files an affidavit to antedate a reference, such a showing of possession does not substitute for a written description in the specification, as required by patent statute. 35 U.S.C.A. § 112.

[21] Patents k99
291k99

Proof of a reduction to practice, absent an adequate description in the specification of what is reduced to practice, does not serve to describe or identify the invention for purposes of the patent statute's written description requirement. 35 U.S.C.A. § 112.

[22] Patents k99
291k99

Written description requirement is the quid pro quo of the patent system; the public must receive meaningful disclosure in exchange for being excluded from practicing the invention for a limited period of time. 35 U.S.C.A. § 112.

Patents k328(2)
291k328(2)

4,900,659. Cited.

***1319** Richard L. Delucia, Kenyon & Kenyon, of New York, NY, filed a petition for rehearing en banc for plaintiff-appellant. With him on the petition were Charles A. Weiss and Bradley S. Corsello.

The appellees filed a consolidated response to the petition for rehearing en banc. William F. Lee, Hale and Dorr ***1320** LLP, of Boston, MA, for defendant-appellee Gen-Probe Incorporated. With him on the response was William G. McElwain.

Robert J. Gunther, Jr., Latham & Watkins, of New York, NY, for defendants- appellees Chugai Pharma U.S.A., Inc. and Chugai Pharmaceutical Co., Ltd. With him on the response was Jeffrey A. Tochner. Of

counsel was Kurt M. Rogers.

Daniel A. Boehnen, McDonnell Boehnen Hulbert & Berghoff, of Chicago, IL, for defendant-appellee Biomerieux, Inc. With him on the response was Joshua R. Rich.

Donald R. Ware, Foley Hoag & Eliot LLP, of Boston, MA, for defendant- appellee Becton Dickinson and Company. With him on the response was Barbara A. Fiacco.

Frank P. Porcelli, Fish & Richardson P.C., of Boston, MA, filed a brief for amicus curiae Fish & Richardson P.C. Of counsel on the brief were Robert E. Hillman and Charles H. Sanders.

Mark S. Davies, Attorney, Appellate Staff, Civil Division, Department of Justice, of Washington, DC, filed an amicus curiae brief for the United States in support of rehearing en banc. With him on the brief were Robert D. McCallum, Jr., Assistant Attorney General, and Scott R. McIntosh, Attorney. Of counsel on the brief was John M. Whealan, Solicitor, U.S. Patent and Trademark Office, of Arlington, Virginia.

Before LOURIE, DYK and PROST, Circuit Judges.

ON PETITION FOR REHEARING

LOURIE, Circuit Judge.

Enzo Biochem, Inc. petitions for rehearing of this appeal following our prior decision, reported at 285 F.3d 1013, 62 USPQ2d 1289 (Fed.Cir.2002), in which we affirmed the decision of the United States District Court for the Southern District of New York. The district court had granted Gen-Probe Incorporated, Chugai Pharma U.S.A., Inc., Chugai Pharmaceutical Co., Ltd., Biomerieux, Inc., Biomerieux SA, and Becton Dickinson and Company's (collectively, "the defendants") motion for summary judgment that claims 1-6 of U.S. Patent 4,900,659 are invalid for failure to meet the written description requirement of 35 U.S.C. § 112, ¶ 1. *Enzo Biochem, Inc. v. Gen-Probe Inc.*, No. 99 Civ. 4548 (S.D.N.Y. Apr. 4, 2001) (final order). Having considered Enzo's petition for rehearing and the defendants' response, [FN1] we have determined that our prior decision that a deposit may not satisfy the written description requirement was incorrect. We therefore grant Enzo's petition for rehearing, vacate the prior decision, and reverse the district court's grant of summary judgment that Enzo's claims are invalid for failure to meet the written description requirement. Because genuine issues of material fact exist regarding satisfaction of the written description requirement, we remand.

FN1. *Amicus curiae* briefs were filed by the United States Patent and Trademark Office and Fish & Richardson P.C.

BACKGROUND

Enzo is the assignee of the '659 patent, which is directed to nucleic acid probes that selectively hybridize to the genetic material of the bacteria that cause gonorrhea, *Neisseria gonorrhoeae. N. gonorrhoeae* reportedly has between eighty and ninety-three percent homology with *Neisseria meningitidis.* '659 patent, col. 2, ll. 61-64. Such a high degree of homology ***1321** has made detection of *N. gonorrhoeae* difficult, as any probe capable of detecting *N. gonorrhoeae* may also show a positive result when only *N. meningitidis* is present. Enzo recognized the need for a chromosomal DNA probe specific for *N. gonorrhoeae,* and it derived three such sequences that preferentially hybridized to six common strains of *N. gonorrhoeae* over six common strains of *N. meningitidis. Id.* at col. 3, l. 49 to col. 4, l. 14; col. 4, ll. 45- 50. The inventors believed that if the preferential hybridization ratio of *N. gonorrhoeae* to *N. meningitidis* were greater than about five to one, then the "discrete nucleotide sequence [would] hybridize to virtually all strains of *Neisseria gonorrhoeae* and to no strain of *Neisseria meningitidis.*" *Id.* at col. 12, ll. 60-65. The three sequences that the inventors actually derived had a selective hybridization ratio of greater than fifty. *Id.* at col. 13, ll. 9-15. Enzo deposited those sequences in the form of a recombinant DNA molecule within an *E. coli* bacterial host at the American Type Culture Collection. *Id.* at col. 13, ll. 27-31.

Claim 1 is as follows:

1. A composition of matter that is specific for *Neisseria gonorrhoeae* comprising at least one nucleotide sequence *for which the ratio of the amount of said sequence which hybridizes to chromosomal DNA of Neisseria gonorrhoeae to the amount of said sequence which hybridizes to chromosomal DNA of Neisseria meningitidis is greater than about five,* said ratio being obtained by a method comprising the following steps;

(a) providing a radioactively labeled form of said nucleotide sequence;

(b) providing a serial dilution series of purified chromosomal DNA from each of the *N. gonorrhoeae* strains; (1) ATCC 53420, (2) ATCC 53421, (3) ATCC 53422, (4) ATCC 53423, (5)

ATCC 53424, (6) ATCC 53425, and forming test dots from each of said dilution series on a matrix;
(c) providing a serial dilution series of purified nucleotide sequences from each of the *N. meningitidis* strains: (1) ATCC 53414, (2) ATCC 53415, (3) ATCC 53416, (4) ATCC 53417, (5) ATCC 53418, (6) ATCC 53419, and forming test dots from each of said dilution series on a matrix;
(d) hybridizing equal portions of the labeled nucleotide sequences to the matrix provided in step (b) and (c), respectively; wherein the hybridization is conducted in a solution having a salt concentration of 2X SSC at (i) 65<<degrees>> C. in cases in which the sequence has greater than 50 base pairs or (ii) at Tm (<<degrees>> C.) minus 30<<degrees>> C. in cases in which the sequence has less than 50 base pairs, wherein Tm is the denaturation temperature of the sequence;
(e) quantifying the labeled nucleotide sequence hybridized in step (d) to each test dot;
(f) subtracting from the data of step (e) an averaged amount of radioactivity attributable to background to obtain a corrected amount of hybridized radioactivity at each test dot;
(g) normalizing the data of step (f) by multiplying the amount of corrected radioactivity at each test dot by a factor which adjusts the amount of radioactivity to equal amounts of chromosomal DNA at each test dot;
(h) selecting two normalized values that are most nearly the same and that correspond to adjacent members ***1322** of the dilution series for each of the above strains of *N. gonorrhoeae* and obtaining the average of the selected values;
(i) selecting two normalized values that are most nearly the same and that correspond to adjacent members of the dilution series for each of the above strains of *N. meningitidis* and obtaining the average of the selected values;
(j) dividing the lowest average obtained in step (h) by the highest average obtained in step (i) to obtain said ratio.

Id. at col. 27, l. 29 to col. 28, l. 27 (emphasis added). Claims 2 and 3 depend from claim 1 and further limit the hybridization ratio to greater than about twenty-five and fifty, respectively. *Id.* at col. 2, ll. 27-30. Claim 4 is directed to the three deposited sequences (referenced by their accession numbers) and variants thereof as follows:

4. The composition of claim 1 wherein said nucleotide sequences are selected from the group consisting of:
a. the *Neisseria gonorroheae* [sic] DNA insert of ATCC 53409, ATCC 53410 and ATCC 53411, and discrete nucleotide subsequences thereof,
b. mutated discrete nucleotide sequences of any of the foregoing inserts that are within said hybridization ratio and subsequences thereof; and
c. mixtures thereof.

Id. at col. 28, ll. 31-39. Claim 5 is directed to an assay for detection of *N. gonorrhoeae* using the composition of claim 1. *Id.* at ll. 40-46. Claim 6 further limits the method of claim 5 to the nucleotide sequences that Enzo deposited (*i.e.*, those in claim 4) and variants thereof. *Id.* at ll. 47-56.

Enzo sued the defendants for infringement of the '659 patent, and the defendants moved for summary judgment that the claims were invalid for failure to meet the written description requirement of 35 U.S.C. § 112, ¶ 1. The district court, in oral remarks from the bench, granted that motion. Tr. of Hr'g at 42, *Enzo Biochem, Inc. v. Gen-Probe, Inc.*, No. 99-CV-4548 (S.D.N.Y. Jan. 24, 2001). It concluded that the claimed composition of matter was defined only by its biological activity or function, *viz.*, the ability to hybridize to *N. gonorrhoeae* in a ratio of better than about five with respect to *N. meningitidis*, which it was held was insufficient to satisfy the § 112, ¶ 1 requirement set forth in this court's holdings in *Regents of the University of California v. Eli Lilly & Co.*, 119 F.3d 1559, 43 USPQ2d 1398 (Fed.Cir.1997), *Fiers v. Revel*, 984 F.2d 1164, 25 USPQ2d 1601 (Fed.Cir.1993), and *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 18 USPQ2d 1016 (Fed.Cir.1991). Tr. of Hr'g at 28. The court rejected Enzo's argument that the reference in the specification to the deposits of biological materials in a public depository inherently disclosed that the inventors were in possession of the claimed sequences. *Id.* at 35. It distinguished this court's precedents concerning deposits as relating to the enablement requirement of § 112, ¶ 1. *Id.* at 38-40. Enzo appealed to this court; we have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

[1][2] Summary judgment is appropriate when there is no genuine issue of material fact and the moving party is entitled to judgment as a matter of law. Fed.R.Civ.P. 56(c); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48, 106 S.Ct. 2505, ***1323** 91 L.Ed.2d 202 (1986). On motion for summary judgment, the court views the evidence and any disputed factual issues in the light most favorable to the party opposing the motion. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587, 106 S.Ct. 1348, 89 L.Ed.2d 538 (1986). A patent is presumed to be valid, 35 U.S.C. § 282 (1994), and

this presumption can be overcome only by facts supported by clear and convincing evidence to the contrary, *see, e.g., WMS Gaming, Inc. v. Int'l Game Tech.,* 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1396-97 (Fed.Cir.1999). Compliance with the written description requirement is a question of fact. *Vas-Cath Inc. v. Mahurkar,* 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed.Cir.1991).

Enzo argues that the testimony of its expert, Dr. Wetmer, raised a genuine factual issue whether the reference to the deposits inherently described the claimed nucleotide sequences. Enzo also argues that its description of the binding affinity of the claimed nucleotide sequences satisfies the requirement set forth in the Guidelines for Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, 66 Fed. Reg. 1099 (Jan. 5, 2001) ("*Guidelines*"). Enzo asserts that the court erred in not evaluating the patentability of the claims separately, pointing out that claims 4 and 6 are directed to the three deposited sequences and variations and mixtures thereof. Enzo further asserts that the claims *per se* meet the written description requirement because they appear *in ipsis verbis* in the written description. Enzo also argues that this court's articulation of the written description requirement for genetic material in *Eli Lilly* should not apply to this case because Enzo reduced the invention to practice and deposited the derived biological materials, thereby demonstrating its "possession" of the invention.

The defendants respond that the district court properly granted summary judgment because the patent described the claimed nucleotide sequences only by their function, which they state is insufficient to meet the requirements of § 112, ¶ 1 as a matter of law, even as to the narrower claims directed to the deposited materials. The defendants also assert that Dr. Wetmur's opinion that the deposited genetic materials could have been sequenced did not cure the actual failure of the inventors to identify them by some distinguishing characteristic, such as their structure. Moreover, the defendants point out that claims 4 and 6, which are directed to the deposited materials, each cover a broad genus of nucleic acids. The defendants also urge that *in ipsis verbis* support for the claims in the specification does not *per se* establish compliance with the written description requirement. Finally, the defendants assert that the district court did not err in its determination that Enzo's "possession" of three nucleotide sequences that it reduced to practice and deposited nevertheless did not satisfy the written description requirement of § 112, ¶ 1.

[3][4] The written description requirement of § 112, ¶ 1 is set forth as follows:

> *The specification shall contain a written description of the invention,* and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

***1324** 35 U.S.C. § 112, ¶ 1 (1994) (emphasis added). We have interpreted that section as requiring a "written description" of an invention separate from enablement. *Vas-Cath,* 935 F.2d at 1563, 19 USPQ2d at 1117 (recognizing the severability of the "written description" and "enablement" provisions of § 112, ¶ 1). Compliance with the written description requirement is essentially a fact-based inquiry that will "necessarily vary depending on the nature of the invention claimed." *Id.* (citing *In re DiLeone,* 58 C.C.P.A. 925, 436 F.2d 1404, 1405, 168 USPQ 592, 593 (1971)). We have also previously considered the written description requirement as applied to certain biotechnology patents, in which a gene material has been defined only by a statement of function or result, and have held that such a statement alone did not adequately describe the claimed invention. *Eli Lilly,* 119 F.3d at 1568, 43 USPQ2d at 1406. In *Eli Lilly,* we concluded that a claim to a microorganism containing a human insulin cDNA was not adequately described by a statement that the invention included human insulin cDNA. *Id.* at 1567, 43 USPQ2d at 1405. The recitation of the term human insulin cDNA conveyed no distinguishing information about the identity of the claimed DNA sequence, such as its relevant structural or physical characteristics. *Id.* We stated that an adequate written description of genetic material " 'requires a precise definition, such as by structure, formula, chemical name, or physical properties,' not a mere wish or plan for obtaining the claimed chemical invention," and that none of those descriptions appeared in that patent. *Id.* at 1566, 43 USPQ2d at 1404 (quoting *Fiers,* 984 F.2d at 1171, 25 USPQ2d at 1606). The specification in the *Eli Lilly* case thus did not show that the inventors had possession of human insulin cDNA.

[5][6] It is not correct, however, that all functional descriptions of genetic material fail to meet the written description requirement. The PTO has issued Guidelines governing its internal practice for addressing that issue. The Guidelines, like the

Manual of Patent Examining Procedure ("MPEP"), are not binding on this court, but may be given judicial notice to the extent they do not conflict with the statute. *See Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1180 n. 10, 33 USPQ2d 1823, 1828 n. 10 (Fed.Cir.1995). In its Guidelines, the PTO has determined that the written description requirement can be met by "show[ing] that an invention is complete by disclosure of sufficiently detailed, relevant identifying characteristics ... *i.e.*, complete or partial structure, other physical and/or chemical properties, *functional characteristics when coupled with a known or disclosed correlation between function and structure,* or some combination of such characteristics." *Guidelines,* 66 Fed. Reg. at 1106 (emphasis added). For example, the PTO would find compliance with 112, 1, for a claim to an isolated antibody capable of binding to antigen X, notwithstanding the functional definition of the antibody, in light of the well defined structural characteristics for the five classes of antibody, the functional characteristics of antibody binding, and the fact that the antibody technology is well developed and mature. Synopsis of Application of Written Description Guidelines, at 60, *available at* http://www.uspto.gov/web/patents/guides.htm (*Application of Guidelines*). Thus, under the Guidelines, the written description requirement would be met for all of the claims of the '659 patent if the functional characteristic of preferential binding to *N. gonorrhoeae* over *N. meningitidis* were coupled with a disclosed correlation between that ***1325** function and a structure that is sufficiently known or disclosed. We are persuaded by the Guidelines on this point and adopt the PTO's applicable standard for determining compliance with the written description requirement.

Applying those principles, we first inquire whether Enzo's deposits of the claimed nucleotide sequences of claims 4 and 6 may constitute an adequate description of those sequences. Secondly, we will consider whether the description requirement is met for all of the claims on the basis of the functional ability of the claimed nucleotide sequences to hybridize to strains of *N. gonorrhoeae* that are accessible by deposit.

[7][8] As to the first question, Enzo asserts that the claimed sequences are inherently described by reference to deposits of three sequences that are within the scope of its claims. Whether reference to a deposit of a nucleotide sequence may adequately describe that sequence is an issue of first impression in this court. In light of the history of biological deposits for patent purposes, the goals of the patent law, and the practical difficulties of describing unique biological materials in a written description, we hold that reference in the specification to a deposit in a public depository, which makes its contents accessible to the public when it is not otherwise available in written form, constitutes an adequate description of the deposited material sufficient to comply with the written description requirement of § 112, ¶ 1.

The practice of depositing biological material arose primarily to satisfy the enablement requirement of § 112, ¶ 1. For example, in *In re Argoudelis,* the patent application claimed antibiotic compounds that were produced by a microorganism. 58 C.C.P.A. 769, 434 F.2d 1390, 1390, 168 USPQ 99, 100 (1970). The applicants deposited the microorganism because they could not "sufficiently disclose by written word how to obtain the microorganism starting material from nature." *Id.* at 1392, 168 USPQ at 102. By making the biological material accessible to the public, they enabled the public to make and use the claimed antibiotics. *Id.* at 1393, 168 USPQ at 102-03. In *Amgen,* we noted the relevance of deposit practice to satisfaction of the enablement requirement but rejected the defendants' argument that a deposit was necessary in that case to satisfy the best mode requirement of § 112, ¶ 1. *See* 927 F.2d at 1210, 18 USPQ2d at 1024; *see also In re Lundak,* 773 F.2d 1216, 1217, 227 USPQ 90, 92 (Fed.Cir.1985) (discussing deposit practice primarily in relation to an enablement rejection and noting that "[a]n accession number and deposit date add nothing to the written description of the invention" in the context of proven availability of a cell line prior to filing date).

Recognizing the importance of biological deposits to patent practice, the PTO has promulgated rules to address the procedural requirements relating to such deposits, but it has declined to expressly correlate substantive requirements relating to deposits with particular statutory requirements. *See* Deposit of Biological Materials for Patent Purposes, 53 Fed. Reg. 39,420, 39,425 (Oct. 6, 1988) (notice of proposed rules) (codified at 37 C.F.R. Part 1) ("The rules are not intended to address which requirements of 35 U.S.C. 112 may be met by the making of deposits."). The Office does offer guidance, however, in determining when a deposit may be necessary, such as "[w]here the invention involves a biological material and words alone cannot sufficiently describe ***1326** how to make and use the invention in a reproducible manner." MPEP § 2402 (8th ed. Aug. 2001). The PTO has also issued a regulation stating when a deposit is not necessary,

i.e., "if it is known and readily available to the public or can be made or isolated without undue experimentation." 37 C.F.R. § 1.802(b) (2001). Inventions that cannot reasonably be enabled by a description in written form in the specification, but that otherwise meet the requirements for patent protection, may be described in surrogate form by a deposit that is incorporated by reference into the specification. While deposit in a public depository most often has pertained to satisfaction of the enablement requirement, we have concluded that reference in the specification to a deposit may also satisfy the written description requirement with respect to a claimed material.

In this case, Enzo's deposits were incorporated by reference in the specification. A person of skill in the art, reading the accession numbers in the patent specification, can obtain the claimed sequences from the ATCC depository by following the appropriate techniques to excise the nucleotide sequences from the deposited organisms containing those sequences. '659 patent, col. 13, ll. 27-36. The sequences are thus accessible from the disclosure in the specification. Although the structures of those sequences, *i.e.*, the exact nucleotide base pairs, are not expressly set forth in the specification, those structures may not have been reasonably obtainable and in any event were not known to Enzo when it filed its application in 1986. *See* ' 659 patent, col. 3, ll. 40-46 (noting severe time constraints in sequencing DNA). We therefore agree with Enzo that reference in the specification to deposits of nucleotide sequences describe those sequences sufficiently to the public for purposes of meeting the written description requirement.

[9] As the defendants point out, however, Enzo's claims 4 and 6 are not limited to the deposited sequences. Claim 4 is directed to nucleotide sequences that are selected from the group consisting of the three deposited sequences, "discrete nucleotide subsequences thereof ... mutated discrete nucleotide sequences of any of the foregoing inserts that are within said hybridization ratio and subsequences thereof[,] and ... mixtures thereof." ' 659 patent, col. 28, ll. 31-39. Claim 6 is also similarly directed to the three deposited sequences and subsequences and mutated variations thereof. *Id.* at ll. 47-56. The specification defines a subsequence non-specifically as a nucleotide sequence "greater than about 12 nucleotides." '659 patent, col. 3, ll. 29-30. As the deposited sequences are about 850, 850, and 1300 nucleotides long, *id.* at col. 13, ll. 47-49, there are at least hundreds of subsequences of the deposited sequences, an unknown number of which might also meet the claimed hybridization ratio. Moreover, Enzo's expert, Dr. Wetmur, stated that "astronomical" numbers of mutated variations of the deposited sequences also fall within the scope of those claims, and that such broad claim scope is necessary to adequately protect Enzo's invention from copyists who could otherwise make a minor change to the sequence and thereby avoid infringement while still exploiting the benefits of Enzo's invention. The defendants assert that such breadth is fatal to the adequacy of the written description. On the other hand, because the deposited sequences are described by virtue of a reference to their having been deposited, it may well be that various subsequences, ***1327** mutations, and mixtures of those sequences are also described to one of skill in the art. We regard that question as an issue of fact that is best resolved on remand. [FN2] Because the district court's grant of summary judgment was based on its conclusion that Enzo's deposits could not satisfy the written description requirement as a matter of law, we reverse the district court's grant of summary judgment that claims 4 and 6 are invalid for failure to meet the written description requirement. On remand, the court should determine whether a person of skill in the art would glean from the written description, including information obtainable from the deposits of the claimed sequences, subsequences, mutated variants, and mixtures sufficient to demonstrate possession of the generic scope of the claims.

> FN2. We do not address the issue whether the breadth of the claim may implicate other validity issues, such as enablement. Only written description is before us.

[10] We next address the question whether the compositions of the broader genus claims 1-3 and 5 are sufficiently described to meet the requirements of § 112, ¶ 1, on the basis of Enzo's deposits of three sequences. If those sequences are representative of the scope of the genus claims, *i.e.*, if they indicate that the patentee has invented species sufficient to constitute the genera, they may be representative of the scope of those claims. *See In re Smythe,* 480 F.2d 1376, 1383, 178 USPQ 279, 284-85 (CCPA 1973) (discussing circumstances in which a species may be representative of and therefore descriptive of genus claims). Because the district court concluded that the deposited sequences were not themselves described, it did not determine whether that description was representative of the genera in those claims. Such determination should be made on remand.

When we addressed a similar issue in *Eli Lilly,* we

determined that a disclosure of the sequence of rat cDNA was not descriptive of the broader invention consisting of mammalian and vertebrate cDNA, although it was a species falling within the scope of those claims. *Eli Lilly,* 119 F.3d at 1567-68, 43 USPQ2d at 1405. In *Eli Lilly,* the specification and generic claims to all cDNAs encoding for vertebrate or mammalian insulin did not describe the claimed genus because they did not set forth any common features possessed by members of the genus that distinguished them from others. *Id.* at 1568, 43 USPQ2d at 1405. Nor did the specification describe a sufficient number of species within the very broad genus to indicate that the inventors had made a generic invention, *i.e.,* that they had possession of the breadth of the genus, as opposed to merely one or two such species. *Id.* The PTO has included a hypothetical example based on the facts of *Eli Lilly* in its Synopsis of Application of Written Description Guidelines in which the description requirement is not met. *See Application of Guidelines,* Example 17, at 61-64. The PTO has also provided a contrasting example of genus claims to nucleic acids based on their hybridization properties, and has determined that such claims may be adequately described if they hybridize under highly stringent conditions to known sequences because such conditions dictate that all species within the genus will be structurally similar. *See id.,* Example 9, at 35-37. Whether the disclosure provided by the three deposits in this case, coupled with the skill of the art, describes the genera of claims 1-3 and 5 is a fact question the district court did not address. On remand, the district court should determine, ***1328** consistently with the precedent of this court and the PTO's Guidelines, whether one skilled in the art would consider the subject matter of claims 1-3 and 5 to be adequately described, recognizing the significance of the deposits and the scope of the claims.

[11] Enzo argues that all of the claims are adequately described on another basis, *viz.,* by means of the disclosed correlation of the function of hybridization with the bacterial DNA. In its petition for rehearing, Enzo states as attorney argument that "[t]he description and claiming of biological materials by their affinity to other materials that are clearly identified in the specification and claims (the particular deposited strains of *N. gonorrhoeae* and *N. meningitidis*) inherently specifies structure, and is routine in this field." Claim 1 sets forth the deposit numbers of six strains of *N. gonorrhoeae* to which the claimed nucleotide sequences preferentially hybridize, as well as the deposit numbers of six strains of *N. meningitidis* that are thereby distinguished. Again, as with the claimed nucleotide sequences, the sequences of the genomic DNA of those bacteria are not disclosed, perhaps because such sequencing would have been unduly burdensome at the time of Enzo's invention. '659 patent, col. 3, ll. 40-46 (noting that it would take 3,000 scientists one month to sequence the genome of one strain of *N. gonorrhoeae* and one strain of *N. meningitidis*). However, as those bacteria were deposited, their bacterial genome is accessible and, under our holding today, they are adequately described in the specification by their accession numbers. Because the claimed nucleotide sequences preferentially bind to the genomic DNA of the deposited strains of *N. gonorrhoeae* and have a complementary structural relationship with that DNA, those sequences, under the PTO Guidelines, may also be adequately described. Although the patent specification lacks description of the location along the bacterial DNA to which the claimed sequences bind, Enzo has at least raised a genuine issue of material fact as to whether a reasonable fact-finder could conclude that the claimed sequences are described by their ability to hybridize to structures that, while not explicitly sequenced, are accessible to the public. Such hybridization to disclosed organisms may meet the PTO's Guidelines stating that functional claiming is permissible when the claimed material hybridizes to a disclosed substrate. That is a fact question. We therefore conclude that the district court erred in granting summary judgment that the claims are invalid for failure to meet the written description requirement. On remand, the court should consider whether one of skill in the art would find the generically claimed sequences described on the basis of Enzo's disclosure of the hybridization function and an accessible structure, consistent with the PTO Guidelines. If so, the written description requirement would be met.

[12][13][14] We next address Enzo's additional argument that the written description requirement for the generic claims is necessarily met as a matter of law because the claim language appears *in ipsis verbis* in the specification. We do not agree. Even if a claim is supported by the specification, the language of the specification, to the extent possible, must describe the claimed invention so that one skilled in the art can recognize what is claimed. The appearance of mere indistinct words in a specification or a claim, even an original claim, does not necessarily satisfy that requirement. One may consider examples ***1329** from the chemical arts. A description of an anti-inflammatory steroid, *i.e.,* a steroid (a generic structural term) described even in

terms of its function of lessening inflammation of tissues fails to distinguish any steroid from others having the same activity or function. Similarly, the expression an antibiotic penicillin fails to distinguish a particular penicillin molecule from others possessing the same activity. A description of what a material does, rather than of what it is, usually does not suffice. *Eli Lilly,* 119 F.3d at 1568, 43 USPQ2d at 1406. The disclosure must allow one skilled in the art to visualize or recognize the identity of the subject matter purportedly described. *Id.*

[15][16] In *Eli Lilly,* we were faced with a set of facts in which the words of the claim alone did not convey an adequate description of the invention. *Id.* at 1567, 119 F.3d 1559, 43 USPQ2d at 1405. In such a situation, regardless whether the claim appears in the original specification and is thus supported by the specification as of the filing date, § 112, ¶ 1 is not necessarily met. *See Guidelines* at 1100 (noting *Eli Lilly's* clarification of the "original claim" doctrine in situations in which the name of the claimed material does not convey sufficient identifying information). If a purported description of an invention does not meet the requirements of the statute, the fact that it appears as an original claim or in the specification does not save it. A claim does not become more descriptive by its repetition, or its longevity.

[17] Inasmuch as 112, 1 requires such description, we are not persuaded by Enzo's argument that, because the specification indicated that Enzo possessed the claimed invention by reducing three sequences within the scope of the claims to practice, Enzo necessarily described the invention. It is true that in *Vas-Cath,* we stated: "The purpose of the 'written description' requirement is broader than to merely explain how to 'make and use'; the applicant must also convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention." *Vas-Cath,* 935 F.2d at 1563-64, 19 USPQ2d at 1117. That portion of the opinion in *Vas-Cath,* however, merely states a *purpose* of the written description requirement, *viz.,* to ensure that the applicant had possession of the invention as of the desired filing date. It does not state that possession alone is always sufficient to meet that requirement. Furthermore, in *Lockwood v. American Airlines, Inc.,* we rejected Lockwood's argument that "all that is necessary to satisfy the description requirement is to show that one is 'in possession' of the invention." 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (Fed.Cir.1997). Rather, we clarified that the written description requirement is satisfied by the patentee's disclosure of "such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the claimed invention." *Id.*

[18][19][20] The articulation of the written description requirement in terms of "possession" is especially meaningful when a patentee is claiming entitlement to an earlier filing date under 35 U.S.C. §§ 119 or 120, in interferences in which the issue is whether a count is supported by the specification of one or more of the parties, and in *ex parte* applications in which a claim at issue was filed subsequent to the application. *See Vas- Cath,* 935 F.2d at 1560, 19 USPQ2d at 1114 (describing situations in which the written description requirement ***1330** may arise); *Ralston Purina Co. v. Far-Mar-Co, Inc.,* 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed.Cir.1985) (noting, in the context of claiming entitlement to the priority date of an earlier application, that the written description requirement is met if "the disclosure of the application relied upon reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter"). Application of the written description requirement, however, is not subsumed by the "possession" inquiry. A showing of "possession" is ancillary to the *statutory* mandate that "[t]he specification shall contain a written description of the invention," and that requirement is not met if, despite a showing of possession, the specification does not adequately describe the claimed invention. After all, as indicated above, one can show possession of an invention by means of an affidavit or declaration during prosecution, as one does in an interference or when one files an affidavit under 37 C.F.R. § 1.131 to antedate a reference. However, such a showing of possession alone does not cure the lack of a written description in the specification, as required by statute.

[21][22] Similarly, we conclude that proof of a reduction to practice, absent an adequate description in the specification of what is reduced to practice, does not serve to describe or identify the invention for purposes of § 112, ¶ 1. As with "possession," proof of a reduction to practice may show priority of invention or allow one to antedate a reference, but it does not by itself provide a written description *in the patent specification.* We are thus not persuaded by Enzo's argument, relying on the PTO's Guidelines, that its disclosure of an actual reduction to practice is an important "safe haven" by which it has demonstrated compliance with the description requirement. The Guidelines state:

> Actual reduction to practice may be crucial in the relatively rare instances where the level of

knowledge and level of skill are such that those of skill in the art cannot describe a composition structurally, or specify a process of making a composition by naming components and combining steps, in such a way as to distinguish the composition with particularity from all others.

Guidelines, 66 Fed. Reg. at 1101. For biological inventions, for which providing a description in written form is not practicable, one may nevertheless comply with the written description requirement by publicly depositing the biological material, as we have held today. That compliance is grounded on the fact of the deposit and the accession number in the specification, not because a reduction to practice has occurred. Such description is the *quid pro quo* of the patent system; the public must receive meaningful disclosure in exchange for being excluded from practicing the invention for a limited period of time.

CONCLUSION

For the foregoing reasons, we conclude that the district court erred in granting summary judgment that the claims of the 659 patent are invalid for failure to meet the written description requirement of 112, 1. While the district judge clearly understood and correctly applied this courts existing precedent, we nevertheless reverse because this case has taken us into new territory and we have held, as a matter of first impression, that reference in a patent specification to a deposit of genetic material may suffice to describe that material. We therefore remand for further resolution consistent with this opinion.

REVERSED and REMANDED

296 F.3d 1316, 63 U.S.P.Q.2d 1609

END OF DOCUMENT

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21 U.S.P.Q.2d 2007
1990 WL 358313 (Bd.Pat.App & Interf.)
(Cite as: 21 U.S.P.Q.2d 2007)

Freerksen
v.
Gass

U.S. Patent and Trademark Office Board of Patent Appeals and Interferences

Interference No. 101,810

Decided September 5, 1990
Released October 10, 1991

United States Patents Quarterly Headnotes

PATENTS
[1] Patentability/Validity -- Date of invention -- In general (Section 115.0401)
Patentability/Validity -- Specification -- Written description (Section 115.1103)
Foreign application for chemical patent relied upon for priority under 35 USC 119 need not describe, in ipsis verbis, chemical species within scope of interference count in order to comply with description requirement of 35 USC 112, first paragraph; rather, foreign application need only reasonably convey to persons skilled in art that as of filing date of such application, inventor had possession of subject matter later claimed.

PATENTS
[2] Practice and procedure in Patent and Trademark Office -- Interference -- Burden of proof (Section 110.1707)
Patentability/Validity -- Specification -- Written description (Section 115.1103)
Controlling legal principle, in determining whether foreign application for chemical patent contains sufficient written description, within meaning of first paragraph of 35 USC 112, for compound or composition which is not specifically disclosed but which is among those suggested by general language in application, is whether specification of such application conveys clearly, to those skilled in art, that party invented compound at issue; showing that "one would necessarily recognize" that particular compound "was disclosed as a construction which might be selected if desired," is insufficient.

PATENTS
[3] Patentability/Validity -- Date of invention -- In general (Section 115.0401)
Patentability/Validity -- Specification -- Written description (Section 115.1103)
Foreign application does not contain sufficient written description of chemical compounds corresponding to interference count within meaning of 35 USC 112, first paragraph, to support priority claim to any of those compounds under 35 USC 119, since foreign application provides no motivation or guidance for one skilled in art to select particular intermediate compound, one of 52 in class of intermediates disclosed in foreign application, as starting material for preparation of final compounds falling within scope of count.

PATENTS
Particular patents -- Chemical -- Herbicides
4,500,344, Freerksen, herbicidal ortho-(alkoxy)-benzenesulfonamides, inventor held entitled to subject matter of count corresponding to claims 1-24 in interference no. 101,810.

***2008** Patent interference between Robert W. Freerksen, patent no. 4,500,344, issued March 19, 1985, on application serial no. 474,873, filed March 21, 1983, and Karl Gass, Werner Fory, Willy Meyer, and Werner Topfl, application serial no. 778,610, filed Sept. 20, 1985, accorded benefit of serial no. 458,799, filed Jan. 18, 1983, and issued as patent no. 4,618,363 on Oct. 21, 1986. Subject matter of count awarded to Freerksen.

Charles J. Shoaf, Gerald E. Deitch, and Roger A. Hines, Wilmington, Del.; Hoge T. Sutherland, Arlington, Va., for Freerksen.

Bruce M. Collins, Parsippany, N.J.; Karl F. Jorda, Harry Falber, Edward McC. Roberts, Michael W. Glynn, Luther A.R. Hall, Irving N. Feit, Norbert Gruenfeld, Irving M. Fishman, and Kevin T. Mansfield, Ardsley, N.Y., for Gass et al.

Before R. Smith, Sofocleous, and Metz, examiners-in-chief.

Sofocleous, examiner-in-chief.

This interference involves a patent of Freerksen,

which is assigned to E.I. du Pont de Nemours & Co., and an application of Gass et al. (Gass), which is assigned to Ciba-Giegy A.G. of Basle, Switzerland.

The subject matter at issue relates to benzenesulfonamide compounds which are useful as pre-emergent or post-emergent herbicides. The sole count at issue reads as follows: Count 1 A compound of the formula:

Image 1 (1□ X 2.25□) Available for Offline Print

wherein

Image 2 (4.5□ X 2.25□) Available for Offline Print

provided that

1) when R [inf 6] and R [inf 7] are both CH [inf 3] , then R [inf 4] is H; and

2) when either R [inf 8] , R [inf 9] or R [inf 1] [inf 0] is CH [inf 3] , then the others must be H;

and their agriculturally suitable salts.

***2009** The claims of the parties which correspond to the count are:

Freerksen: Claims 1 to 24.

Gass: Claims 1 to 3, 6 to 8, 10 to 13, 20, 21 and 28 to 30.

In the Decision on Motions (Paper No. 14), the Examiner-in-Chief (EIC) denied Gass' preliminary motion (Paper No. 8) for the benefit of Swiss Application No. 437/82-3, filed January 25, 1982. Thereafter, the EIC set Freerksen a testimony period in order to establish a date for invention earlier than his filing date. After the testimony had been taken, the parties stipulated that the Freerksen record establishes conception and actual reduction to practice of the invention defined by the count prior to the filing of Gass' parent U.S. application on January 18, 1983 but subsequent to the filing of Gass' Swiss application on January 25, 1982. The parties agree that the only issue to be decided at final hearing is whether Gass is entitled to the benefit of his Swiss priority application. If Gass is, then Gass will prevail. If Gass is not, then Freerksen will prevail.

Both parties filed briefs and the party Gass appeared, through counsel, at final hearing.

Gass' Entitlement to Benefit

We have carefully reviewed the arguments in the parties' briefs and we find that we agree with the EIC that Gass is not entitled to the benefit of his Swiss priority application. We agree with the EIC that the Swiss application does not contain a written description within the meaning of 35 U.S.C. 112, first paragraph, for a species within the scope of the count.

For a party to be accorded the benefit of a foreign application under 35 U.S.C. 119, the application must satisfy the requirements of 35 U.S.C. 112, first paragraph. Kawai v. Metlesics, 480 F.2d 880, 178 USPQ 158 (CCPA 1973). These requirements need only be met for an embodiment within the scope of the count in the special situation the count is drawn to a genus and the previously filed application discloses only a species thereof. Weil v. Fritz, 572 F.2d 856, 196 USPQ 600 , note 16 (CCPA 1978).

[1] Here, the Swiss priority application does not describe in ipsis verbis a species within the scope of count 1. This, however, is not necessary in order to comply with the description requirement of 35 USC 112, first paragraph, In re Lukach, 442 F.2d 967, 169 USPQ 796 (CCPA 1971); all that is required is that the application reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. In re Edwards, 558 F.2d 1349, 196 USPQ 465 (CCPA 1978); In re Driscoll, 562 F.2d 1245, 195 USPQ 434 (CCPA 1977).

I

It is Gass' position that the Swiss application reasonably conveys to those skilled in the art that Gass had possession, as of his filing date, of one of the following benzenesulfonamide compounds,

Image 3 (4□ X 2.25□) Available for Offline Print

all of which fall within the scope of the count. Gass calls our attention to the fact that the Swiss application specifically discloses a class of intermediate compounds of Formula II [FN1]

Image 4 (1.25□ X 2□) Available for Offline Print

***2010** and discloses as a member of that class the following intermediate

Image 5 (1.25□ X 2□) Available for Offline Print

This intermediate is compound 16 in the table on page 18 of Gass' translation of the Swiss priority application. The translation teaches at page 7 that compounds of Formula II can be converted to their corresponding isocyanates of Formula IV [FN2]

Image 6 (1.25□ X 2.25□) Available for Offline Print

which are thereafter reacted with a 2-aminopyrimidine or a 2-aminotriazine of Formula V [FN3]

Image 7 (1.5□ X 2□) Available for Offline Print

to produce the benzenesulfonamide compounds having Formula I [FN4]

Image 8 (1.5□ X 2.5□) Available for Offline Print

Gass contends that one following this disclosure would recognize that intermediate compound 16 can be converted into its corresponding isocyanate and thereafter reacted with a 2-aminopyrimidine or a 2-aminotria zine of Formula V to produce compounds having the following formula:

Image 9 (1.5□ X 2.5□) Available for Offline Print

Gass states that the Swiss application specifically discloses 17 final compounds having 2-aminotriazine moieties where E is N; R [inf 2] is OCH [inf 3] and R [inf 3] is OCH [inf 3] , CH [inf 3] or n([inf 3]) [inf 2] , thus indicating to those skilled in the art a preference for those particular values for E, R [inf 2] and R [inf 3] . See Gass' main brief, pages 31 to 33. It is Gass' position that reacting intermediate compound 16 with any of the aforesaid 2-aminotriazine moieties would result in the obtention of one of the three aforementioned benzenesulfonamide compounds which fall within the scope of the count.

II

[2] In our view, the Swiss application does not reasonably lead one of ordinary skill to any of the three aforementioned benzenesulfonamide compounds of the count, i.e., does not reasonably convey to those skilled in the art that Gass had possession of any of the three aforementioned benzenesulfonamide compounds of the count. Cf. Flynn v. Eardley, 479 F.2d 1393, 178 USPQ 288 (CCPA 1973); Fields v. Conover, 443 F.2d 1386, 170 USPQ 276 (CCPA 1971); Olson v. Julia, 209 USPQ 159 (Bd.Pat.Int. 1979).

Gass urges in his main brief at page 5:

In determining what "reasonably leads one," Gass respectfully submits the controlling legal principle is not whether one "would select those particular substituents" from the Swiss application but rather, as recently stated by this Board in Heymes v. Takaya, [6 USPQ2d 1448 (BPAI 1988)] supra, whether one would necessarily recognize that such a combination was disclosed as a construction which might be selected if desired:

The issue is not whether one following the Takaya disclosure would necessarily ***2011** produce the compounds of claim 119; rather, it is whether he would necessarily recognize that such a combination was disclosed as a construction which might be selected if desired. [FN5]

We do not agree with Gass that the foregoing passage in Heymes v. Takaya, supra, represents the "controlling legal principle" for determining whether the Swiss application reasonably leads one of ordinary skill to a compound within the scope of the count. Rather, the test is, as noted in Heymes v. Takaya, 6 USPQ2d 1448 at 1452 (BPAI 1988),

[W]hether the . . . specification conveys clearly to those skilled in the art that Takaya invented the compounds at issue.

The question of whether an application contains a sufficient written description within the meaning of 35 USC 112, first paragraph, for a compound or a composition which is not specifically disclosed but which is among those suggested by general language in the application must be decided on its own facts. In re Driscoll, supra. Prutton v. Fuller, 230 F.2d 459, 109 USPQ 59 (CCPA 1956).

In Heymes, a panel of the Board found that the Takaya disclosure, even though it did not describe in ipsis verbis a thiazolyl compound within the scope of the count, nevertheless provided adequate direction to those skilled in the art to such a thiazolyl compound, i.e.,

we agree with Takaya that one skilled in the art would nevertheless be directed to the compounds of claim 119 because Takaya teaches that R1 may be phenyl or thiazolyl, and one skilled in the art would recognize that the compounds with R1 as phenyl could also be prepared with R1 as thiazolyl. Further, one skilled in the art would be motivated to prepare

the compounds with R1 as phenyl in view of the comparative tests set forth in the Takaya specification which indicate that in 5 out of 6 comparisons the thiazolyl compounds resulted in superior activity than the phenyl compounds. Heymes at 1453.

> [3] As contrasted with Heymes, the Gass Swiss application does not provide any motivation such that one skilled in the art would select intermediate compound 16 as a starting material for the reaction with any of the aforesaid 2-aminotriazine moieties. In none of the examples set forth in the application is intermediate compound 16 used as a starting material to prepare any of the final compounds listed in examples 101 to 133. Nor does the Swiss application provide any blazemarks so as to guide those skilled in the art to select intermediate compound 16 as a starting material. In this regard, we note that compound 16 is but one of 52 intermediates within the scope of Formula II. One skilled in the art might fortuitously select intermediate compound 16 as the starting material, react it with an appropriate 2- aminotriazine moiety and obtain one of the three aforementioned benzenesulfonamide compounds within the scope of the count. Such a happenstance does not necessarily mean that the application conveys to those skilled in the art that Gass invented those compounds or that the application constitutes a constructive reduction to practice of the invention of the count where as here the application provides no motivation or other guidance for the selection of intermediate compound 16 other than pure chance. In other words, the Swiss application does not contain a sufficient written description within the meaning of 35 USC 112, first paragraph, to support a claim to any of those compounds. Cf. Flynn v. Eardley, supra; In re Rushig, 379 F.2d 990, 154 USPQ 118 (CCPA 1967). As noted by the Rushig Court at 122,

Specific claims to single compunds require reasonably specific supporting disclosure and while we agree with the appellants, as the board did, that naming is not essential, something more than the disclosure of a class of 1000, or 100, or even 48, compounds is required. Surely, given time, a chemist could name (especially with the aid of a computer) all of the half million compounds within the scope of the broadcast claim, which claim is supported by the broad disclosure. This does not constitute support for each compound individually when separately claimed.

For the foregoing reasons, we hold that Gass is not entitled to the benefit of Swiss Application No. 437/82-3, filed January 25, 1982.

JUDGMENT

It is hereby adjudged that on the present record,

Robert W. Freerksen is entitled to a patent containing claims 1 to 24; and

Karl Gass, Werner Fory, Willy Meyer and Werner Topfl are not entitled to a patent containing claims 1 to 3, 6 to 8, 10 to 13, 20, 21, 28, 29 and 30.

FN1 We have not listed the definitions for the substituents R [inf 1] , X, A, Q or m.

FN2 We have not listed the definitions for the substituents R [inf 1] , X, A, Q or m.

FN3 We have not listed the definitions for the substituents R [inf 2] , R [inf 3] , or E.

FN4 We have not listed the definitions for the substituents R [inf 1] , X, A, Q, m, E, R [inf 2] or R [inf 3] .

FN5 Heymes v. Takaya, 6 USPQ2d, at 1452, citing Byrne v. Trifillis, 442 F.2d 1390, 170 USPQ 322 (CCPA 1971) main brief at page 5.

P.T.O. Bd.Pat.App. & Int.

21 U.S.P.Q.2d 2007

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93 F.3d 1559
39 U.S.P.Q.2d 1895
(Cite as: 93 F.3d 1559)

United States Court of Appeals,
Federal Circuit.

Yoshihiro FUJIKAWA, Mikio Suzuki, Hiroshi Iwasaki, Mitsuaki Sakashita and Masaki Kitahara, Appellants,
v.
Sompong WATTANASIN, Appellee. (Two Cases).

Nos. 95-1418, 95-1425.

Aug. 28, 1996.

Patent interference proceeding was brought. The Board of Patent Appeals and Interferences of the United States Patent & Trademark Office awarded priority of invention to junior party, and senior party appealed. The Court of Appeals, Clevenger, Circuit Judge, held that: (1) in vitro and in vivo tests established practical utility for compound and method counts; (2) junior party did not suppress or conceal invention; and (3) senior party was not entitled to add sub-genus count to interference.

Affirmed.

West Headnotes

[1] Patents k46
291k46

[1] Patents k98
291k98

Patent may not be granted to invention unless substantial or practical utility for invention has been discovered and disclosed.

[2] Patents k46
291k46

[2] Patents k90(5)
291k90(5)

Actual reduction to practice, which constitutes in law the final phase of invention for which patent is sought, cannot be established absent showing of practical utility.

[3] Patents k14
291k14

[3] Patents k49
291k49

In pharmaceutical arts, practical utility of compound for which patent is sought may be shown by adequate evidence of any pharmacological activity.

[4] Patents k49
291k49

To show practical utility of novel pharmacological compound for which patent is sought, there must be sufficient correlation between tests and asserted pharmacological activity so as to convince those skilled in the art, to a reasonable probability, that compound will exhibit asserted pharmacological behavior.

[5] Patents k114.22
291k114.22

[5] Patents k114.25
291k114.25

Ultimate determination of reduction to practice of invention for which patent is sought is a question of law that Court of Appeals reviews de novo.

[6] Patents k114.25
291k114.25

Court of Appeals reviews factual findings supporting legal conclusions of Board of Patent Appeals and Interferences about reduction to practice for clear error.

[7] Patents k114.22
291k114.22

Whether practical utility has been established for novel compound for which patent is sought is a question of fact.

[8] Patents k90(5)
291k90(5)

In vitro tests of compounds for inhibiting cholesterol biosynthesis established practical utility of compound genus; several compounds exhibited activity in vitro, and experts indicated that in vitro test results convinced them that claimed compounds would exhibit desired pharmacological activity when administered in vivo.

[9] Patents k90(5)
291k90(5)

Method of inhibiting biosynthesis of cholesterol by administering compound was reduced to practice when successful in vivo testing of compound was completed, even though one anomaly in test data showed that compound's potency was less at higher dosage than at lower dosage.

[10] Patents k114.25
291k114.25

Suppression or concealment of invention for which patent is sought is a question of law that Court of Appeals reviews de novo. 35 U.S.C.A. § 102(g).

[11] Patents k90(1)
291k90(1)

"Intentional suppression" of invention for which patent is sought refers to situations in which inventor designedly, and with view of applying it indefinitely and exclusively for his own profit, withholds his invention from public. 35 U.S.C.A. § 102(g).

[12] Patents k90(1)
291k90(1)

"Intentional suppression" of invention for which patent is sought requires more than passage of time; it requires evidence that inventor intentionally delayed filing in order to prolong period during which invention is maintained in secret. 35 U.S.C.A. § 102(g).

[13] Patents k90(5)
291k90(5)

[13] Patents k97
291k97

Inventor of compound and method for inhibiting cholesterol biosynthesis did not intentionally suppress or conceal invention; all indications were that throughout period between reduction to practice and filing of patent application, inventor moved slowly but inexorably toward disclosure. 35 U.S.C.A. § 102(g).

[14] Patents k91(.5)
291k91(.5)

Evidence that first inventor was spurred to disclose by activities of a second inventor is an important factor in determinations of patent priority. 35 U.S.C.A. § 102(g).

[15] Patents k97
291k97

Circumstances surrounding first inventor's delay in filing for patent and reasonableness of that delay are important factors that must be considered in deciding questions of suppression or concealment. 35 U.S.C.A. § 102(g).

[16] Patents k97
291k97

Inference of suppression or concealment of compound and method for inhibiting cholesterol biosynthesis in humans and other animals was not warranted, despite delay of seventeen months between reduction to practice and filing for patent; subject was complex, inventor moved slowly toward filing application, and unexplained period of delay was only three months. 35 U.S.C.A. § 102(g).

[17] Patents k90(5)
291k90(5)

Inventor's reduction to practice of compound for inhibiting cholesterol biosynthesis, which was followed by period of inactivity, did not bar him from relying on his earliest date of renewed activity for purposes of priority of patent applications. 35 U.S.C.A. § 102(g).

[18] Patents k99
291k99

Whether disclosure contains a sufficient written description to support addition of proposed count in patent interference proceeding is a question of fact that Court of Appeals reviews for clear error. 35 U.S.C.A. § 112.

[19] Patents k99
291k99

Ipsis verbis disclosure is not necessary to satisfy

written description requirement of statute governing patent specifications; instead, disclosure need only reasonably convey to persons skilled in the art that inventor had possession of subject matter in question. 35 U.S.C.A. § 112.

[20] Patents k106(2)
291k106(2)

Senior party was not entitled to add sub-genus count to patent interference in proceeding pertaining to compound and method for inhibiting cholesterol biosynthesis; senior party's proposed count was not disclosed ipsis verbis in junior party's application, and one of ordinary skill in the art would not have been directed by junior party's application to senior party's proposed sub- genus count. 35 U.S.C.A. § 112.

***1560** Steven B. Kelber, Oblon, Spivak, McClelland, Maier & Neustadt, P.C., Arlington, Virginia, argued, for appellants.

***1561** Diane E. Furman, Sandoz Corporation, East Hanover, New Jersey, argued, for appellee.

Before MAYER, CLEVENGER, and RADER, Circuit Judges.

CLEVENGER, Circuit Judge.

Yoshihiro Fujikawa et al. (Fujikawa) appeal from two decisions of the Board of Patent Appeals and Interferences of the United States Patent & Trademark Office (Board) granting priority of invention in two related interferences to Sompong Wattanasin, and denying Fujikawa's motion to add an additional sub-genus count to the interferences. We affirm.

I

These interferences pertain to a compound and method for inhibiting cholesterol biosynthesis in humans and other animals. The compound count recites a genus of novel mevalonolactones. The method count recites a method of inhibiting the biosynthesis of cholesterol by administering to a "patient in need of said treatment" an appropriate dosage of a compound falling within the scope of the compound count.

The real parties in interest are Sandoz Pharmaceuticals Corporation (Sandoz), assignee of Wattanasin, and Nissan Chemical Industries, Ltd. (Nissan), assignee of Fujikawa.

The inventive activity of Fujikawa, the senior party, occurred overseas. Fujikawa can thus rely only on his effective filing date, August 20, 1987, to establish priority. 35 U.S.C. § 102(g) (1994). Whether Wattanasin is entitled to priority as against Fujikawa therefore turns on two discrete questions. First, whether Wattanasin has shown conception coupled with diligence from just prior to Fujikawa's effective filing date until reduction to practice. *Id.* Second, whether Wattanasin suppressed or concealed the invention between reduction to practice and filing. *Id.* With respect to the first question, Fujikawa does not directly challenge the Board's holdings on Wattanasin's conception or diligence, but rather contends that the Board incorrectly fixed the date of Wattanasin's reduction to practice. As for the second question, Fujikawa contends that the Board erred in concluding that Wattanasin had not suppressed or concealed the invention. Fujikawa seeks reversal, and thus to establish priority in its favor, on either ground.

II

The Board divided Wattanasin's inventive activity into two phases. The first phase commenced in 1979 when Sandoz began searching for drugs which would inhibit the biosynthesis of cholesterol. Inventor Wattanasin was assigned to this project in 1982, and during 1984-1985 he synthesized three compounds falling within the scope of the compound count. When tested *in vitro,* each of these compounds exhibited some cholesterol-inhibiting activity, although not all the chemicals were equally effective. Still, according to one Sandoz researcher, Dr. Damon, these test results indicated that, to a high probability, the three compounds "would be active when administered *in vivo* to a patient to inhibit cholesterol biosynthesis, i.e. for the treatment of hypercholesteremia or atherosclerosis." Notwithstanding these seemingly positive results, Sandoz shelved Wattanasin's project for almost two years, apparently because the level of *in vitro* activity in two of the three compounds was disappointingly low.

By January 1987, however, interest in Wattanasin's invention had revived, and the second phase of activity began. Over the next several months, four more compounds falling within the scope of the compound count were synthesized. In October, these compounds were tested for *in vitro* activity, and each of the four compounds yielded positive results. Again, however, there were significant differences in

the level of *in vitro* activity of the four compounds. Two of the compounds in particular, numbered 64-935 and 64- 936, exhibited *in vitro* activity significantly higher than that of the other two compounds, numbered 64-933 and 64-934.

Soon after, in December 1987, the three most active compounds *in vitro* were subjected to additional *in vivo* testing. For Sandoz, one primary purpose of these tests was to ***1562** determine the *in vivo* potency of the three compounds relative to that of Compactin, a prior art compound of known cholesterol-inhibiting potency. From the results of the *in vivo* tests, reproduced in the margin, [FN1] Sandoz calculated an ED sub50 [FN2] for each of the compounds and compared it to the ED sub50 of Compactin. Only one of the compounds, compound 64-935, manifested a better ED sub50 than Compactin: an ED sub50 of 0.49 as compared to Compactin's ED sub50 of 3.5. All of the tests performed by Sandoz were conducted in accordance with established protocols.

FN1.

Compound	dosage	% change
64-933	1.0	-36.3%
	0.3	-17.0%
	0.1	-18.6%
64-935	1.0	-65.8%
	0.3	-29.7%
	0.1	-36.3%
64-936	1.0	- 9.0%
	0.3	-39.2%
	0.1	-22.5%

FN2. The ED sub50 of a compound represents the effective concentration, measured in milligrams of compound per kilogram of laboratory specimen, which inhibits cholesterol biosynthesis by 50%.

During this period, Sandoz also began to consider whether, and when, a patent application should be filed for Wattanasin's invention. Several times during the second phase of activity, the Sandoz patent committee considered the question of Wattanasin's invention but decided that it was too early in the invention's development to file a patent application. Each time, however, the patent committee merely deferred decision on the matter and specified that it would be taken up again at subsequent meetings. Finally, in January 1988, with the *in vivo* testing completed, the Committee assigned Wattanasin's invention an "A" rating which meant that the invention was ripe for filing and that a patent application should be prepared. The case was assigned to a Ms. Geisser, a young patent attorney in the Sandoz patent department with little experience in the pharmaceutical field.

Over the next several months the Sandoz patent department collected additional data from the inventor which was needed to prepare the patent application. This data gathering took until approximately the end of May 1988. At that point, work on the case seems to have ceased for several months until Ms. Geisser began preparing a draft sometime in the latter half of 1988. The parties dispute when this preparation began. Fujikawa contends that it occurred as late as October, and that Ms. Geisser was spurred to begin preparing the draft application by the discovery that a patent to the same subject matter had been issued to a third party, Picard. Fujikawa, however, has no evidence to support that contention. In contrast, Sandoz contends that Ms. Geisser began the draft as early as August, and that she was already working on the draft when she first heard of Picard's patent. The evidence of record, and in particular the testimony of Ms. Geisser, supports that version of events. In any event, the draft was completed in November and, after several turn-arounds with the inventor, ultimately filed in March of 1989.

Both Wattanasin and Fujikawa requested an interference with Picard. The requests were granted and a three-party interference between Picard, Fujikawa, and Wattanasin was set up. Early in the proceedings, however, Picard filed a request for an adverse judgment presumably because he could not antedate Fujikawa's priority date. What remained was a two-party interference between Fujikawa and Wattanasin. Ultimately, for reasons not significant to this appeal, the interference was divided into two interferences: one relating to the method count and one relating to the compound count. The Board decided each of these interferences adverse to Fujikawa.

With respect to the compound count, the Board made two alternative findings regarding reduction to practice. First, it found that the *in vitro* results in October 1987 showed sufficient practical utility for the compound so as to constitute a reduction to practice as of the date of those tests. [FN3] In the alternative, ***1563** the Board held, the *in vivo* tests which showed significant activity in the 64-935 compound at doses of 1.0 and 0.1 mg were sufficient to show practical utility. Consequently, Wattanasin had reduced the compound to practice, at the latest, as of December 1987. Since Fujikawa did not challenge Wattanasin's diligence for the period between Fujikawa's effective filing date of August 20, 1987 and Wattanasin's reduction to practice in either October or December 1987, the Board held that Wattanasin was *de facto* the first inventor of the compound count. Finally, the Board found that the seventeen month period (counting from the *in vitro* testing) or fifteen month period (counting from the *in vivo* testing) between Wattanasin's reduction to practice and filing was not sufficient to raise an inference of suppression or concealment given the complexity of the invention, and therefore awarded priority of the compound count to Wattanasin. In reaching this conclusion, the Board rejected Fujikawa's argument that Wattanasin was spurred to file by Picard because it held that spurring by Picard, a third party, had no legal effect in a priority dispute between Fujikawa and Wattanasin.

> FN3. As explained more fully below, reduction to practice requires a showing of practical utility, which may be satisfied by an "adequate showing of any pharmacological activity." *Nelson v. Bowler,* 626 F.2d 853, 856, 206 USPQ 881, 883 (CCPA 1980).

With respect to the method count, the Board determined that Wattanasin reduced to practice in December 1987 on the date that *in vivo* testing of the 64-935 compound was concluded. In reaching that conclusion, the Board first noted that a reduction to practice must include every limitation of the count. Consequently, Wattanasin's early *in vitro* testing could not constitute a reduction to practice of the *method* count, since that count recites administering the compound to a "patient." The *in vivo* testing, however, met the limitations of the count since the word "patient" was sufficiently broad to include the laboratory rats to whom the compounds were administered. The *in vivo* testing also proved that 64-935 had practical utility because the compound displayed significant cholesterol inhibiting activity at doses of 1.0 and 0.1 mg. Given this date of reduction to practice, the Board again held that Wattanasin was the *de facto* first inventor of the count and that the delay in filing of fifteen months was not sufficient to trigger an inference of suppression or concealment. The Board therefore awarded priority of the method count to Wattanasin.

Before this court, Fujikawa seeks review of these adverse priority determinations. In addition, during the motions period of the interference, Fujikawa moved to have an additional sub-genus count added to the interference. The Board denied that motion on the ground that the Wattanasin disclosure did not contain a sufficient written description to support the proposed count. Fujikawa appeals that decision, as well. We have jurisdiction to hear this appeal under 28 U.S.C. § 1295(a)(4)(A) (1994).

III

We first address Fujikawa's argument that Wattanasin's *in vitro* and *in vivo* tests failed to establish a practical utility for either the compound or method count. The Board held that the *in vitro* tests established a practical utility for the compound and that the *in vivo* tests established a practical utility for both the compound and method counts. For the reasons set out below, we affirm these findings of the Board.

[1][2] For over 200 years, the concept of utility has occupied a central role in our patent system. *See Brenner v. Manson,* 383 U.S. 519, 529, 86 S.Ct. 1033, 1039, 16 L.Ed.2d 69, 148 USPQ 689, 693 (1966). Indeed, "[t]he basic *quid pro quo* contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with substantial

utility." *Id.* at 534, 86 S.Ct.at 1042, 148 USPQ at 695. Consequently, it is well established that a patent may not be granted to an invention unless substantial or practical utility for the invention has been discovered and disclosed. *See Cross v. Iizuka,* 753 F.2d 1040, 1044, 224 USPQ 739, 742 (Fed.Cir.1985). Similarly, actual reduction to practice, which constitutes in law the final phase of invention, cannot be established absent a showing of practical utility. *See Blicke v. Treves,* 44 C.C.P.A. 753, 241 F.2d 718, 720-21, 112 USPQ 472, 474-75 (1957).

***1564** [3] In the pharmaceutical arts, our court has long held that practical utility may be shown by adequate evidence of any pharmacological activity. *See, e.g., Nelson v. Bowler,* 626 F.2d 853, 856, 206 USPQ 881, 883 (CCPA 1980); *In re Krimmel,* 48 C.C.P.A. 1116, 292 F.2d 948, 952-53, 130 USPQ 215, 219 (1961). For example, in *Campbell v. Wettstein,* 476 F.2d 642, 646-47, 177 USPQ 376, 379 (CCPA 1973) we stated that "[m]oreover, the interference counts contain no limitation relating to intended use or to discovered properties of the claimed compounds. Accordingly, under well-established precedent, evidence establishing substantial utility for any purpose is sufficient to show reduction to practice." The rule in *Campbell* was applied in *Rey-Bellet v. Engelhardt,* 493 F.2d 1380, 1383, 181 USPQ 453, 454 (CCPA 1974) ("Since the count contains no limitation related to any utility, evidence which would establish a substantial utility for any purpose is sufficient to show its reduction to practice."). [FN4] Such activity constitutes a practical utility because "[i]t is inherently faster and easier to combat illnesses and alleviate symptoms when the medical profession is armed with an arsenal of chemicals having known pharmacological activities. Since it is crucial to provide researchers with an incentive to disclose pharmacological activities in as many compounds as possible, we conclude that adequate proof of any such activity constitutes a showing of practical utility." *Nelson,* 626 F.2d at 856, 206 USPQ at 883; *see also Krimmel,* 292 F.2d at 952-53, 130 USPQ at 219.

> FN4. Strictly speaking, this articulation of the standard (i.e. evidence of *any* pharmacological activity) applies only when the count does not recite a particular utility. *See Rey-Bellet v. Engelhardt,* 493 F.2d 1380, 1383, 181 USPQ 453, 454 (CCPA 1974). In contrast, when the count recites a particular utility, practical utility requires an adequate showing of the recited utility. In this case, the compound count does not recite a particular utility, and practical utility is thus satisfied by evidence of any pharmacological activity. The method count, however, does recite a particular utility (i.e., cholesterol inhibition in patients in need of such treatment), and practical utility for that count therefore requires an adequate showing of that recited utility.

[4] It may be difficult to predict, however, whether a novel compound will exhibit pharmacological activity, even when the behavior of analogous compounds is known to those skilled in the art. Consequently, testing is often required to establish practical utility. *See, e.g., Blicke,* 241 F.2d at 720, 112 USPQ at 475. But the test results need not absolutely prove that the compound is pharmacologically active. All that is required is that the tests be "*reasonably* indicative of the desired [pharmacological] response." *Nelson,* 626 F.2d at 856, 206 USPQ at 884. (emphasis added). In other words, there must be a sufficient correlation between the tests and an asserted pharmacological activity so as to convince those skilled in the art, to a reasonable probability, that the novel compound will exhibit the asserted pharmacological behavior. *See Cross,* 753 F.2d at 1050, 224 USPQ at 747.

[5][6][7] The ultimate determination of reduction to practice is a question of law which we review de novo. *See Holmwood v. Sugavanam,* 948 F.2d 1236, 1238, 20 USPQ2d 1712, 1714 (Fed.Cir.1991). In contrast, we review the Board's factual findings supporting its legal conclusions about reduction to practice for clear error. *Id.* Whether a practical utility has been established for a novel compound is a question of fact. *See Cross,* 753 F.2d at 1044 n. 7, 224 USPQ at 742 n. 7. We therefore review the Board's findings with respect to practical utility for clear error.

A

This court has, on many occasions, considered the type and quantity of testing necessary to establish a practical utility for a novel compound. Although each case of practical utility must be considered on its own facts, *see, e.g., Blicke,* 241 F.2d at 720, 112 USPQ at 475, examination of our precedent illustrates the degree of proof which we have deemed sufficient to establish practical utility in the past.

[8] The facts in this case are substantially similar to those in *Cross v. Iizuka,* 753 F.2d 1040, 224 USPQ

739 (Fed.Cir.1985). There, we expressly held that, in appropriate circumstances, evidence of *in vitro* testing ***1565** could adequately establish a practical utility. [FN5] As we there explained:

> FN5. While *Cross* involved a constructive reduction to practice, the same general principles are applicable to an actual reduction to practice. *See id.* at 1046 n. 14, 224 USPQ at 744 n. 14.

We perceive no insurmountable difficulty, under appropriate circumstances, in finding that the first link in the screening chain, *in vitro* testing, may establish a practical utility for the compound in question.... [U]nder the circumstances of the instant case, where [an application] discloses an *in vitro* utility, ... and where the disclosed *in vitro* utility is supplemented by the similar *in vitro* and *in vivo* pharmacological activity of structurally similar compounds, ... we agree with the Board that this *in vitro* utility is sufficient to [establish utility].

Id. at 1051, 224 USPQ at 748. Thus, *Cross* holds that positive *in vitro* results, in combination with a known correlation between such *in vitro* results and *in vivo* activity, may be sufficient to establish practical utility.

Fujikawa does not argue that the law as stated in *Cross* is incorrect. Instead, Fujikawa contends that Wattanasin has failed to establish an adequate correlation between *in vitro* and *in vivo* results in the field of cholesterol- inhibiting compounds to permit Wattanasin to rely on affirmative *in vitro* results to establish a practical utility for the compound.

The Board determined that Wattanasin had reduced the compound count to practice in October 1987 when several compounds falling within the scope of the genus count exhibited activity *in vitro.* In reaching that conclusion, the Board relied on testimony from those skilled in the art that the *in vitro* results convinced them that the claimed compounds would exhibit the desired pharmacological activity when administered *in vivo.* This included testimony that "*in vivo* activity is typically highly correlatable to a compound's *in vitro* activity" in this field. The facts in this case are thus analogous to the ones in *Cross* where the court relied on positive *in vitro* test results in combination with a known correlation between such *in vitro* tests and *in vivo* activity to support a finding of practical utility.

To counter the Board's decision, Fujikawa points to the testimony of its own expert, Dr. Holmlund, who testified that:

> there is a reasonable element of doubt that some elements may be encountered which are active in the *in vitro* assay, but yet inactive in the *in vivo* assay.

According to Fujikawa, this testimony establishes that the *in vitro* tests were insufficient to prove practical utility.

We note first that to the extent the record presents a conflict in the testimony, the Board was well within its discretion as fact finder to credit the testimony of Wattanasin's witnesses over that of Fujikawa's. More fundamentally, however, we do not consider Dr. Holmlund's testimony as a whole to contradict the Board's finding. Of course, it is possible that some compounds active *in vitro* may not be active *in vivo.* But, as our predecessor court in *Nelson* explained, a "rigorous correlation" need not be shown in order to establish practical utility; "reasonable correlation" suffices. Here, even Dr. Holmlund implied in the question and answer immediately following the above quoted portion of his testimony, that such a "reasonable correlation" exists:

> Q. Would you accept, subject to exceptions that might occur, that the failure to find [*in vivo*] activity would be considered an exception, that there would be a reasonable expectancy [that *in vitro* activity implies that the compound will be active *in vivo*]?
>
> A. I think I would probably accept that.

Fujikawa also cites two articles [FN6] which it claims show that there is no reliable relationship between *in vitro* results and *in vivo* results in cholesterol inhibiting compounds similar to the ones at issue in this case. We disagree. Although the Sliskovic article, for ***1566** example, teaches that *in vitro* testing is sometimes not a good indicator of how potent a compound will be *in vivo,* it does imply that compounds which are active *in vitro* will normally exhibit some *in vivo* activity. *See* Sliskovic, at 370. Similarly, the Kathawala article expressly states: "For most substances, although not for all, the relative potency determined in *in vitro* microsomal assay against HMG-CoA reductase parallels the *in vivo* activity in rats for the inhibition of 14C-acetate into sterols." Kathawala at 136-37. On these facts, we hold that the Board did not err in finding that Wattanasin's *in vitro* tests established a practical utility for the genus recited in the compound count.

FN6. The two articles are D.R. Sliskovic et

al, *Inhibitors of Cholesterol Biosynthesis,* 34 J. Med. Chemistry 367 (1991) (Sliskovic); and F.G. Kathawala, *HMG-CoA Reductase Inhibitors: An Exciting Development in the Treatment of Hyperlipoproteinemia,* 11 Medicinal Research Reviews 121 (1991) (Kathawala).

B

[9] Turning to the method count, the Board found that Wattanasin reduced the method to practice in December 1987 when successful *in vivo* testing of the compound was completed. This finding, too, was based on testimony that the *in vivo* data for one of the compounds tested, 64-935, showed significant cholesterol inhibiting activity in the laboratory rats tested.

Fujikawa challenges the Board's holding by referring to an anomaly in the test data of the 64-935 compound which it contends undercuts the reliability of the *in vivo* tests. In particular, Fujikawa points to the fact that the compound's potency was less at a dosage of 0.3 mg than it was at a dosage of 0.1 mg. On the basis of this aberration, Fujikawa's expert, Dr. Holmlund, testified that this test data was unreliable and could not support a finding that the compound was pharmacologically active.

It is clear from the Board's opinion, however, that to the extent Dr. Holmlund was testifying that this aberration would lead one of ordinary skill to completely reject these test results, the Board did not accept his testimony. This decision of the Board was not clear error. Admittedly, the decreased potency at 0.3 mg is curious. The question remains, however, as to how much this glitch in the data would undercut the persuasiveness of the test results as a whole in the mind of one of ordinary skill. Each party presented evidence on this point and the Board resolved this disputed question of fact by finding that the test results as a whole were sufficient to establish pharmacological activity in the minds of those skilled in the art. In doing so, the Board properly exercised its duty as fact finder, and we therefore affirm its finding on this point. [FN7]

FN7. Before the Board, Fujikawa additionally argued that *in vivo* testing cannot establish reduction to practice of the method count because it does not fulfill every limitation of the count. In particular, Fujikawa argued that only human beings can be considered "patients in need of" cholesterol biosynthesis inhibition, as required by the count. As noted above, the Board rejected this argument and held that the term "patient" in the count is broad enough to encompass mammals, such as the laboratory rats tested *in vivo*.
In its brief to this court, Fujikawa renews this argument. In the process, however, Fujikawa seems to add an additional ground which it did not argue before the Board below. We are not absolutely certain, but it appears that Fujikawa is now contending that *in vivo* testing cannot constitute a reduction to practice because the rats tested were, from all that would appear, healthy animals, rather than animals in need of cholesterol biosynthesis inhibition. To the extent that Fujikawa's argument before this court is directed to this novel ground not raised below, we consider the argument waived and decline to address it. To the extent that Fujikawa is still arguing that the count requires administration of the compound to a human, we disagree, and affirm the Board's decision on this point.

As noted above, Fujikawa does not challenge the Board's conclusions that Wattanasin conceived prior to Fujikawa's effective date or that Wattanasin pursued the invention with diligence from just prior to Fujikawa's date until his reductions to practice in October and December 1987. Consequently, we affirm the Board's finding that Wattanasin has shown conception coupled with diligence from just prior to Fujikawa's effective date of August 20, 1987 up to the date he reduced the invention to practice in October 1987, for the compound, or December 1987, for the method.

IV

Having determined that Wattanasin was the *de facto* first inventor, the remaining question before the Board was whether Wattanasin had suppressed or concealed the invention ***1567** between the time he reduced to practice and the time he filed his patent application. Suppression or concealment of the invention by Wattanasin would entitle Fujikawa to priority. 35 U.S.C. § 102(g).

[10] Suppression or concealment is a question of law which we review de novo. *Brokaw v. Vogel,* 57 C.C.P.A. 1296, 429 F.2d 476, 480, 166 USPQ 428, 431 (1970). Our case law distinguishes between two types of suppression and concealment: cases in which the inventor deliberately suppresses or

conceals his invention, and cases in which a legal inference of suppression or concealment is drawn based on "too long" a delay in filing a patent application. *Paulik v. Rizkalla,* 760 F.2d 1270, 1273, 226 USPQ 224, 226 (Fed.Cir.1985) (in banc).

[11][12][13] Fujikawa first argues that there is evidence of intentional suppression or concealment in this case. Intentional suppression refers to situations in which an inventor "designedly, and with the view of applying it indefinitely and exclusively for his own profit, withholds his invention from the public." *Id.* (quoting *Kendall v. Winsor,* 62 U.S. (21 How.) 322, 328, 16 L.Ed. 165 (1858)). Admittedly, Sandoz was not overly efficient in preparing a patent application, given the time which elapsed between its reduction to practice in late 1987 and its ultimate filing in March 1989. Intentional suppression, however, requires more than the passage of time. It requires evidence that the inventor intentionally delayed filing in order to prolong the period during which the invention is maintained in secret. *Cf. Peeler v. Miller,* 535 F.2d 647, 653-54, 190 USPQ 117, 122 (CCPA 1976) (implying that intentional suppression requires showing of specific intent). Fujikawa presented no evidence that Wattanasin delayed filing for this purpose. On the contrary, all indications are that throughout the period between reduction to practice and filing, Sandoz moved slowly (one might even say fitfully), but inexorably, toward disclosure. We therefore hold that Wattanasin did not intentionally suppress or conceal the invention in this case.

Absent intentional suppression, the only question is whether the 17 month period between the reduction to practice of the compound, or the 15 month period between reduction to practice of the method, and Wattanasin's filing justify an *inference* of suppression or concealment. *See id.* The Board held that these facts do not support such an inference. As the Board explained: "In our view, this hiatus in time is not sufficiently long to raise the inference that Wattanasin suppressed or concealed the invention considering the nature and complexity of the invention here."

[14] Fujikawa attacks this finding of the Board on two grounds. First, it contends that the Board should not have held that a 15 or 17 month delay is *per se* insufficient to raise an inference of suppression or concealment without examining the circumstances surrounding the delay and whether, in view of those circumstances, Wattanasin's delay was reasonable. Second, Fujikawa argues that the Board failed to consider evidence that Wattanasin was spurred to file by the issuance of a patent to a third party, Picard, directed to the same genus of compounds invented by Wattanasin. Evidence that a first inventor was spurred to disclose by the activities of a second inventor has always been an important factor in priority determinations because it creates an inference that, but for the efforts of the second inventor, "the public would never have gained knowledge of [the invention]." *Brokaw,* 429 F.2d at 480, 166 USPQ at 431. Here, however, the Board expressly declined to consider the evidence of spurring because it held that spurring by a third party who is not a party to the interference is irrelevant to a determination of priority as between Wattanasin and Fujikawa. We first address Fujikawa's arguments concerning spurring.

A

We are not certain that the Board is correct that third party spurring is irrelevant in determining priority. After all, "[w]hat is involved here is a policy question as to which of the two rival inventors has the greater right to a patent." *Brokaw,* 429 F.2d at 480, 166 USPQ at 430. Resolution of this question could well be affected by the fact that one of the inventors chose to maintain his ***1568** invention in secrecy until disclosure by another spurred him to file, even when the spurrer was a third party not involved in the interference. We need not resolve that question here, however, because we hold that no reasonable fact finder could have found spurring on the facts of this case. The only evidence in the record on the question of spurring is the testimony of Ms. Geisser who expressly testified that she had already begun work on the Wattanasin draft application before she learned of Picard's patent, in other words, that she had not been spurred by Picard. Consequently, we leave the question of the relevance of third party spurring for another case.

B

[15] Fujikawa's other argument also requires us to examine the evidence of record in this case. As Fujikawa correctly notes, this court has not set strict time limits regarding the minimum and maximum periods necessary to establish an inference of suppression or concealment. *See Correge v. Murphy,* 705 F.2d 1326, 1330, 217 USPQ 753, 756 (Fed.Cir.1983). Rather, we have recognized that "it is not the time elapsed that is the controlling factor but the total conduct of the first inventor." *Young v. Dworkin,* 489 F.2d 1277, 1285, 180 USPQ 388, 395 (CCPA 1974) (Rich, J., concurring). Thus, the circumstances surrounding the first inventor's delay and the reasonableness of that delay are important

factors which must be considered in deciding questions of suppression or concealment. *See, e.g., id.* at 1281-82, 180 USPQ at 392- 93. Fujikawa again correctly notes that the Board's opinion gives short shrift to the question of whether *this* delay on the facts of *this* case was reasonable. In seeking reversal of the Board's decision, Fujikawa asks us to assess the factual record for ourselves to determine whether Wattanasin engaged in sufficient disclosure-related activity to justify his 17-month delay in filing. The facts of record, however, do not support Fujikawa's position.

[16] In our view, the circumstances in this case place it squarely within the class of cases in which an inference of suppression or concealment is not warranted. We acknowledge, of course, that each case of suppression or concealment must be decided on its own facts. Still, the rich and varied case law which this court has developed over many years provides some guidance as to the type of behavior which warrants an inference of suppression or concealment. *See Paulik,* 760 F.2d at 1280, 226 USPQ at 231-32 (Rich, J., concurring). In this case Wattanasin delayed approximately 17 months between reduction to practice and filing. During much of that period, however, Wattanasin and Sandoz engaged in significant steps towards perfecting the invention and preparing an application. For example, we do not believe any lack of diligence can be ascribed to Wattanasin for the period between October and December 1987 when *in vivo* testing of the invention was taking place. *See Young,* 489 F.2d at 1281, 180 USPQ at 392. Similarly, at its first opportunity following the *in vivo* testing, the Sandoz patent committee approved Wattanasin's invention for filing. This takes us up to the end of January 1988.

Over the next several months, until May 1988, the Sandoz patent department engaged in the necessary collection of data from the inventor and others in order to prepare Wattanasin's patent application. We are satisfied from the record that this disclosure-related activity was sufficient to avoid any inference of suppression or concealment during this period. [FN8] *Cf. Correge,* 705 F.2d at 1330-31, 217 USPQ at 756 (five significant acts of disclosure-related activity over the course of seven months sufficient to rebut any inference of suppression). Also, as noted above, the record indicates that by August 1988, Ms. Geisser was already at work preparing the application, and that work continued on various drafts until Wattanasin's filing date in March 1989. Thus, the only real period of unexplained delay in this case is the ***1569** approximately three month period between May and August of 1988.

> FN8. Our conclusion in this regard is based, in small part, on the testimony of Mr. Melvyn Kassenoff, a lawyer in Sandoz's patent department. Before the Board, Fujikawa challenged large parts of this testimony as inadmissible. In this opinion we therefore rely only on those portions of the testimony which even Fujikawa concedes are admissible, i.e., testimony relating to Mr. Kassenoff's legal services rendered in connection with the prosecution of Wattanasin's application.

Given a total delay of 17 months, an unexplained delay of three months, the complexity of the subject matter at issue, and our sense from the record as a whole that throughout the delay Sandoz was moving, albeit slowly, towards filing an application, we conclude that this case does not warrant an inference of suppression or concealment. Consequently, we affirm the Board on this point.

C

[17] Finally, Fujikawa contends that assuming *in vitro* tests are sufficient to establish reduction to practice, Wattanasin reduced the compound count to practice in 1984 when he completed *in vitro* testing of his first three compounds falling within the scope of the count. If so, Fujikawa argues, the delay between reduction to practice and filing was greater than four years, and an inference of suppression or concealment is justified. [FN9]

> FN9. This argument, of course, relates only to the compound count, since, as explained above, the method count was not reduced to practice until the *in vivo* testing in December 1987.

We reject this argument in view of *Paulik v. Rizkalla,* 760 F.2d 1270, 226 USPQ 224 (Fed.Cir.1985) (in banc). In *Paulik,* we held that a suppression or concealment could be negated by renewed activity prior to an opposing party's effective date. There, inventor Paulik reduced his invention to practice and submitted an invention disclosure to his employer's patent department. For four years the patent department did nothing with the disclosure. Then, just two months before Rizkalla's effective date, the patent department allegedly picked up Paulik's disclosure and worked diligently to prepare a

patent application which it ultimately filed. *See id.* at 1271-72, 226 USPQ at 224-25. We held that although Paulik could not rely on his original date of reduction to practice to establish priority, he could rely on the date of renewed activity in his priority contest with Rizkalla. In large measure, this decision was driven by the court's concern that denying an inventor the benefit of his renewed activity, might "discourage inventors and their supporters from working on projects that had been 'too long' set aside, because of the impossibility of relying, in a priority contest, on either their original work or their renewed work." *Id.* at 1275-76, 226 USPQ at 227-28.

Paulik 's reasoning, if not its holding, applies squarely to this case. A simple hypothetical illustrates why this is so. Imagine a situation similar to the one facing Sandoz in early 1987. A decisionmaker with limited funds must decide whether additional research funds should be committed to a project which has been neglected for over two years. In making this decision, the decisionmaker would certainly take into account the likelihood that the additional research might yield valuable patent rights. Furthermore, in evaluating the probability of securing those patent rights, an important consideration would be the earliest priority date to which the research would be entitled, especially in situations where the decisionmaker knows that he and his competitors are "racing" toward a common goal. Thus, the right to rely on renewed activity for purposes of priority would encourage the decisionmaker to fund the additional research. Conversely, denying an inventor the benefit of renewed activity would discourage the decisionmaker from funding the additional research.

Here, Wattanasin returned to his abandoned project well before Fujikawa's effective date and worked diligently towards reducing the invention to practice a second time. For the reasons explained above, we hold that, on these facts, Wattanasin's earlier reduction to practice in 1984 does not bar him from relying on his earliest date of renewed activity for purposes of priority.

V

[18] Fujikawa also appeals the Board's decision denying Fujikawa's motion to add a sub-genus count to the interference. The Board denied the motion because it found that Wattanasin's disclosure did not sufficiently describe Fujikawa's proposed count. Whether a disclosure contains a sufficient written description to support a proposed count, is a question of fact which we review ***1570** for clear error. *Ralston Purina Co. v. Far-Mar-Co, Inc.*, 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed.Cir.1985). We affirm the Board's denial of Fujikawa's motion because we do not believe it was clearly erroneous.

Wattanasin's application disclosed compounds of the following structure:

Image 1 (1.75□ X 2.75□) Available for Offline Print

wherein each of R and R sub0 is, independently, C sub1-6 alkyl (primary, secondary, or tertiary), C sub3-7 cycloalkyl, or the following ring,

Image 2 (1.75□ X 1.75□) Available for Offline Print

and each of R sub1 , R sub2 , R sub3 , R sub4 , and R sub5 is, independently, hydrogen, C sub1-4 alkyl, C sub1-4 alkoxy, trifluoromethyl, fluoro, chloro, phenoxy, benzyloxy, or hydroxy.

In addition to this genus of compounds, Wattanasin disclosed as his preferred embodiments that: R sub1 and R sub2 are most preferably hydrogen, R sub0 is most preferably phenyl, 4-fluorophenyl, or 3,5-dimethylphenyl; and R is most preferably methyl [FN10] or isopropyl. [FN11]

> FN10. Methyl is another name for C sub1 alkyl.
>
> FN11. isopropyl is another name for C sub3 alkyl.

Essentially, Fujikawa's proposed sub-genus is directed to compounds of the above structure in which R is cyclopropyl [FN12] and R sub0 is 4-fluorophenyl. In other respects, the parties do not dispute that the particular constituents recited in Fujikawa's proposed count are adequately disclosed in Wattanasin's application. Thus, for example, both Wattanasin's most preferred embodiment and Fujikawa's proposed count describe R sub1 and R sub2 as hydrogen.

> FN12. cyclopropyl is another name for C sub3 cycloalkyl.

In denying Fujikawa's motion, the Board first noted that the proposed sub-genus was not disclosed *ipsis verbis* by Wattanasin. Specifically, the Board noted that Wattanasin preferred methyl and isopropyl for R,

rather than cyclopropyl as in the proposed count. In addition, Wattanasin listed three preferred choices for R sub0 only one of which was 4-fluorophenyl and gave no indication in his application as to whether he would prefer any one of the choices over the other two.

[19] As the Board recognized, however, *ipsis verbis* disclosure is not necessary to satisfy the written description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question. *In re Edwards,* 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978). In other words, the question is whether Wattanasin's "application provides adequate direction which reasonably [would lead] persons skilled in the art" to the sub- genus of the proposed count. *Id.* at 1352, 196 USPQ at 467.

Many years ago our predecessor court graphically articulated this standard by analogizing a genus and its constituent species to a forest and its trees. As the court explained:

> It is an old custom in the woods to mark trails by making blaze marks on the trees. It is no help in finding a trail ... to be confronted simply by a large number of unmarked trees. Appellants are pointing to trees. We are looking for blaze marks which single out particular trees. We see none.

In re Ruschig, 54 C.C.P.A. 1551, 379 F.2d 990, 994-95, 154 USPQ 118, 122 (1967).

***1571** In finding that Wattanasin's disclosure failed to sufficiently describe the proposed sub-genus, the Board again recognized that the compounds of the proposed count were not Wattanasin's preferred, and that his application contained no blazemarks as to what compounds, other than those disclosed as preferred, might be of special interest. In the absence of such blazemarks, simply describing a large genus of compounds is not sufficient to satisfy the written description requirement as to particular species or sub-genuses. *See, e.g., id.* 379 F.2d at 994, 154 USPQ at 122 ("Specific claims to single compounds require reasonably specific supporting disclosure and while ... *naming* [each species] is not essential, something more than the disclosure of a class of 1000, or 100, or even 48 compounds is required.").

[20] Before this court, Fujikawa challenges the Board's denial of its motion on two grounds. First, Fujikawa persists in arguing that its proposed count is disclosed *ipsis verbis* in Wattanasin's application. The basis for this contention seems to be that Wattanasin lists cyclopropyl as one possible moiety for R in his disclosure of the genus. Clearly, however, just because a moiety is listed as one possible choice for one position does not mean there is *ipsis verbis* support for every species or sub-genus that chooses that moiety. Were this the case, a "laundry list" disclosure of every possible moiety for every possible position would constitute a written description of every species in the genus. This cannot be because such a disclosure would not "reasonably lead" those skilled in the art to any particular species. We therefore reject Fujikawa's argument on this point.

Second, Fujikawa claims that the Board erred in finding that Wattanasin's disclosure contained insufficient blazemarks to direct one of ordinary skill to the compounds of its proposed count. Specifically, Fujikawa points out that with respect to practically every position on the compound, the proposed count recites at least one of Wattanasin's preferred choices. Even with respect to position R, Fujikawa further explains, one of ordinary skill would have been moved by Wattanasin's disclosure to substitute cyclopropyl for isopropyl because the two substituents are isosteric.

While Fujikawa's arguments are not without merit, we cannot say, on this record, that the Board's decision was clearly erroneous. As the Board pointed out, Fujikawa's proposed sub-genus diverges from Wattanasin's preferred elements at least with respect to position R. Although, in hindsight, the substitution of cyclopropyl for isopropyl might seem simple and foreseeable, Wattanasin's disclosure provides no indication that position R would be a better candidate for substitution than any other. Thus, faced with Wattanasin's disclosure, it was not clear error to hold that one of ordinary skill would not be led to Fujikawa's sub-genus in particular.

Were we to extend *Ruschig* 's metaphor to this case, we would say that it is easy to bypass a tree in the forest, even one that lies close to the trail, unless the point at which one must leave the trail to find the tree is well marked. Wattanasin's preferred embodiments do blaze a trail through the forest; one that runs close by Fujikawa's proposed tree. His application, however, does not direct one to the proposed tree in particular, and does not teach the point at which one should leave the trail to find it. We therefore affirm the Board's denial of Fujikawa's motion.

VI

For the reasons we set forth above, the decision of the Board is, in all respects,

AFFIRMED.

93 F.3d 1559, 39 U.S.P.Q.2d 1895

END OF DOCUMENT

Furman
v.
Cheng

U.S. Patent and Trademark Office Board of Patent Appeals and Interferences

Interference No. 104,523

Decided May 14, 2001

PATENTS

[1] Practice and procedure in Patent and Trademark Office -- Interference -- Counts (§ 110.1703)

Patentability/Validity -- Date of invention -- Reduction to practice (§ 115.0405)

Party seeking benefit of earlier-filed foreign or U.S. application under 35 U.S.C. § 119 or 120 for purpose of overcoming prior art must establish that earlier application complies with first paragraph of 35 U.S.C. § 112 with respect to each claim for which benefit is desired; however, in establishing benefit for purposes of priority in interference, benefit application need only describe single enabled embodiment within scope of count to constitute constructive reduction to practice of invention of count, and it is therefore unnecessary to establish that benefit application complies with first paragraph of Section 112 as to claim of party's involved patent or application.

[2] Practice and procedure in Patent and Trademark Office -- Interference -- Motions (§ 110.1717)

Patentability/Validity -- Date of invention -- In general (§ 115.0401)

Party need not establish that one or more of its claims involved in interference are described in earlier-filed applications in order to be accorded benefit of those applications for purpose of priority in interference, since it is sufficient if applications describe any one embodiment within scope of count; in present case, junior party's preliminary motion attacking benefit accorded senior party based on earlier applications is denied, since junior party has failed to prima facie establish that senior party's prior applications do not describe embodiments within scope of junior party's involved claim, which is within scope of count.

Patent interference between Phillip A. Furman and George R. Painter III, junior party (application no. 07/775,187), and Yung-Chi Cheng, senior party (application no. 08/463,960). On junior party's preliminary motion attacking priority benefit accorded senior party based on earlier applications. Denied.

[Editor's Note: The Board of Patent Appeals and Interferences has indicated that this opinion is not binding precedent of the board.]

Albert L. Jacobs Jr. and Eugene C. Rzucidlo, of Greenberg Traurig, New York, N.Y., for junior party.

Samuel B. Abrams and L. Leslie Misrock, of Pennie & Edmonds, New York, for senior party.

Before McKelvey, senior administrative patent judge, and Torczon and Gardner- Lane, administrative patent judges.

Per Curiam.

MEMORANDUM OPINION

(Decision on preliminary motions)

A. Introduction

The interference is before a Trial Section Motions Panel for decision on preliminary motions.

Furman Preliminary Motion 1 (Paper 20) attacks benefit for the purpose of priority accorded to Cheng in the NOTICE DECLARING INTERFERENCE (Paper1, page 46). 37 CFR § 1.633(g). Cheng has opposed (Paper 32) and Furman has filed a reply (Paper 39).

According to Furman, Cheng should not have been accorded benefit for the purpose of priority as to Cheng application 07/686,617 (filed 17 April 1991) (Ex 2001) or Cheng application 07/718,806 (filed 21 June 1991) (Ex 2002).

Furman has the burden of proof (37 CFR § 1.637(a)). The standard of proof is by a

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preponderance of the evidence.

B. "Benefit" of an earlier filing date

In view of the manner in which the parties have argued the "benefit" issue before us, we deem it appropriate to discuss benefit for the purpose of priorityand to contrast that "benefit" with benefit for the purpose of overcoming prior artunder 35 U.S.C. § § 119 or 120.

1.

Resolution of a right to benefit under 35 U.S.C. § § 119 or 120 arises only when a claim of a party is alleged to be unpatentable under 35 U.S.C. § § 102 or 103 over a non-statutory bar reference with a prior art date prior to the filing date of the party. One way of overcoming an allegation of unpatentability is to obtain benefit, under 35 U.S.C. § § 119 or 120, of a filing date of an earlier filed U.S. patent application (§ 120) or an earlier filed foreign patent application (§ 119).

An earlier filed foreign or domestic application is not examined to determine whether a party is actually entitled to the benefit of an earlier filing date except when an earlier filing date is actually needed. In re Shaw 202 USPQ 285, 292 (Comm'r Pat. 1978). In an interference, the need for benefit under 35 U.S.C. § § 119 or 120 arises when (1) a party files a preliminary motion under 37 CFR § 1.633(a)***1670** for judgment alleging unpatentability over the prior art of an opponent's claims and (2) the opponent opposes on the ground that it is entitled to benefit under 35 U.S.C. § § 119 or 120.

[1] To obtain benefit under 35 U.S.C. § 120, a party must establish that an earlier U.S. application complies with the first paragraph of 35 U.S.C. § 112 with respect to each claimfor which benefit is desired. 35 U.S.C. § 120; In re Lukach, 442 F.2d 967, 169 USPQ 795 (CCPA 1971) (to be entitled to § 120 benefit, subject matter claimed in continuing application must be described in parent in manner required by § 112).

To obtain benefit under 35 U.S.C. § 119, a party must also establish that an earlier foreign application complies with the first paragraph of 35 U.S.C. § 112, again with respect to each claim for which benefit is desired. In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989); In re Wertheim, 541 F.2d 257, 261, 191 USPQ 90, 95-96 (CCPA 1976).

A party may be entitled to benefit under § § 119 or 120 as to one claim, but not for another claim. Accordingly, a party claiming benefit to overcome prior art under 35 U.S.C. § § 119 or 120, must independently establish its entitlement to benefit for each claim for which benefit is urged. As to those claims where the benefit date is prior to the effective prior art date of a reference, the reference is overcome.

2.

Benefit for the purpose of priority in an interference declared under 35 U.S.C. § 135(a) is something different than benefit for the purpose of overcoming prior art. Anderson v. Norman, 185 USPQ 371 (Comm'r Pat. 1968) (an earlier disclosure of a species is a constructive reduction to practice of a count expressing a genus; according benefit for purpose of priority is different from according benefit to get around prior art).

a.

In each interference, there is at least one count. The initial count is set out in a notice declaring interference. A count defines the interfering subject matter. 37 CFR § 1.601(f). The claims of the parties which are involved in the interference within the meaning of 35 U.S.C. § 135(a) are designated to correspond to the count. A claim designated as corresponding to a count may be broader or narrower in scope than the count. A presumption exists that all claims of all parties which are designated as corresponding to a count are presumed to cover, in whole or in part, subject matter which defines the same patentable invention. A party may seek to overcome the presumption by filing a preliminary motion to designate a claim as notcorresponding to the count. 37 CFR § 1.633(c)(4).

The presumption is important. If a party believes that a claim designated as corresponding to a count does not interfere-in-fact with any claim of its opponent, the party should file a preliminary motion to have its claim designated as notcorresponding to the count. If no preliminary motion is filed, and a party loses on the issue of priority, then on that issue all of a party's claims designated as corresponding to the count fall together. Likewise, if a preliminary motion is filed, but is denied, then on the issue of

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priority all claims designated as corresponding to a count fall together. On the other hand, if a party files a preliminary motion for judgment based on alleged unpatentability of its opponent's claims, the party must address each claim individually. 37 CFR § 1.633(a). Thus, on unpatentability issues raised under 37 CFR § 1.633(a), the claims do not fall together--on the merits of the prior art or attempts to obtain benefit under 35 U.S.C. § § 119 or 120, unless the opponent fails to oppose separately. However, with respect to priority, all claims designated as corresponding to the count fall together both as to priority proofs and benefit for the purpose of priority.

b.

According benefit for the purpose of priority establishes a party's date which an opponent must "overcome." If the opponent cannot overcome a benefit date, the opponent loses on the issue of priority. Since at least some of the subject matter of all of the opponent's claims which have been designated as corresponding to the count cover a single patentable invention and because the party established priority vis-a-vis the opponent, all of the opponent's claims corresponding to the count become unpatentable.

The fact that a party "wins" an interference does not per semean the party is entitled to a patent. What is clear, however, is that a party who loses an interference is notentitled to a patent with claims designated as corresponding***1671** to the count. Entry of a judgment against a party in an interference is a final decision of the Patent and Trademark Office refusing those claims. 35 U.S.C. § 135(a). Hence, it becomes manifest that an adverse decision on priority is patent defeating.

According benefit for the purpose of priority (i.e., a constructive reduction to practice)and proof of priority on the merits (i.e., conception, actual reduction to practice and, if necessary, diligence) involve similar concepts. Proof of a prior actual reduction to practice of a species within the scope of a count, prior to an opponent's date, results in an award of priority against the opponent. Benefit for the purpose of priority functions in much the same way. Thus, a benefit application need only describe a single enabled embodiment within the scope of the count to constitute a constructive reduction to practice of the invention of the count. Hunt v. Treppschuh,523 F.2d 1386, 1389, 187 USPQ 426, 429 (CCPA 1975); see also Weil v. Fritz,572 F.2d 856, 865 n. 16, 196 USPQ 600, 608 n. 16 (CCPA 1978) (as Hunt v. Treppschuh*** explains, "the § 112, first paragraph requirements need only be met for an embodiment within the count" where the count is drawn to a genus and the previously-filed application discloses only a species thereof). In establishing benefit for the purpose of priority, it is not necessary to establish that a benefit application complies with the first paragraph of 35 U.S.C. § 112 as to a claimof a party's involved patent or application.

C. Scope of the count

It is our view that this case has been made somewhat complicated by the fact that the parties do not seem to have applied the principles set out above in connection with their respective litigation strategy associated with Furman Preliminary Motion 1. For example, Furman alleges in its preliminary motion (Paper 20, page 2) that (emphasis added).

Cheng should not be accorded benefit [for the purpose of priority] of the Cheng '617 application *** or the Cheng '806 application * * * because the Cheng claimscorresponding to Count 1 are limited to the use of particular compounds * * *.

Benefit is accorded with respect to a count, not claims corresponding to a count. Thus, to determine whether Cheng is entitled to benefit, we first need to determine the scope of the count.

There is but one count. It reads as follows (Paper 1, page 47):

A method according to claims 1, 2, 3 or 5 of Furman application 07/775,187

or

a method according to claims 3, 37, 40, 41, 152, 153, 156 or 157 of Cheng application 08/463,960.

The count "consists" of the sum of the scopes of Furman claims 1, 2, 3 and 5 and the sum of the scopes of Cheng claims 3, 37, 40, 41, 152, 153, 156 and 157. Proof of a constructive reduction to practice of a species within the scope of any one of the mentioned Furman or Cheng claims constitutes a basis for according benefit for the purpose of priority.

The scope of the mentioned Furman and Cheng claims differ. Highly relevant to Cheng's benefit for

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the purpose of priority is the alternative of Count 1 represented by Furman claim 2. Furman claim 2 reads:

A method of interfering with HBV [meaning hepatitis B virus] production in an HBV infected host comprising the administration of an affective HBV production interfering amount of the compound 1-(2-(hydroxymethyl)-1, 3- oxathiolan-5-yl)-cytosine to said HBV infected host.

If Cheng can establish that its benefit applications constitute a constructive reduction to practice of the subject matter of Furman claim 2 (one alternative of the count) then Cheng can establish its right to benefit for the purpose of priority as to Count 1. Since that benefit was accorded in the NOTICE DECLARING INTERFERENCE, it becomes Furman's burden to establish (37 CFR § 1.637(a)) that Cheng's benefit applications do not constitute a constructive reduction to practice of any alternative of the count, including Furman claim 2. The mere fact that Cheng may not be entitled to benefit for the purpose of priority, say of Cheng claim 3 [FN1] corresponding to the count, does not mean Cheng is not entitled to benefit for the purpose of priority with respect***1672** to another Cheng or Furman claim mentioned in the count.

D. Findings of fact on the merits

The following findings are supported on this record by at least a preponderance of the evidence.

The issue

1. In the NOTICE DECLARING INTERFERENCE (Paper 1, page 46), Cheng was accorded benefit for the purpose of priority of several patent applications, including:

a. Cheng U.S. application 07/686,617 (filed 17 April 1991) (Ex 2001) and

b. Cheng application 07/718,806 (filed 21 June 1991) (Ex 2002).

2. The issue before us is whether Furman has established that the two Cheng benefit applications do notconstitute a constructive reduction to practice of the invention defined by Count 1.

3. As we see it, the issue narrows to whether Furman has established that the two Cheng benefit applications do notconstitute a constructive reduction to practice of the subject matter of Furman claim 2.

The invention

4. The invention relates to treatment of hepatitis B viral infections in mammals, including humans.

5. Furman involved application 07/775,187 was filed on 11 October 1991.

6. Furman has been accorded the benefit for the purpose of priority of a British patent application filed on 2 May 1991 (Paper 1, page 45).

7. According to Furman (specification, pages 2-3) : [FN2]

We have now surprisingly found that 1-(2-(hydroxymethyl)-1,3-oxathiolan-5- yl)-cytosines of formula I

wherein R is hydrogen or CC1-3 alkyl or a pharmaceutically acceptable salt, ester or other physiologically functional derivative thereof have potent activity against HBV [hepatitis B virus].

It should be noted that the compounds of formula I contain two chiral centers and therefore exist in the form of two pairs of optical isomers (i.e. enantiomers) and mixtures thereof including racemic mixtures. Thus the compounds of formula I may be either cisor trans isomers or mixtures thereof. Each cisand transisomer can exist as one of two enantiomers or mixtures thereof including racemic mixtures. All such isomers and mixtures thereof including racemic mixtures are within the scope of the invention. The cis isomers of the compound of formula I are preferred.

8. Cheng involved application 08/463,960 was filed on 5 June 1995.

9. Cheng benefit application 07/718,806 ('806) was filed on 21 June 1991 (Ex 2002).

10. Cheng benefit application 07/686,617 ('617) was filed on 17 April 1991 (Ex 2001).

11. Cheng has been accorded benefit for the purpose of priority of both the '806 and the '617 applications (Paper 1, page 46).

12. Cheng '806 makes the following observation (Ex

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2002, pages 14-15) (indentation and paragraph numbering in brackets added):

The present invention concerns a method involving the administration of

[1] (-)3'-thia-2',3'-dideoxyeytidine,

[2] (+-)3'-thia-2',3'-dideoxycytidine,

***1673** * * * (referred to herein as "the compounds of formula (I)" or a salt or ester thereof, alone or in admixture with a pharmaceutically acceptable carrier in order to treat patients suffering from hepatitis B virus or to prevent hepatitis B virus infection.

Formula (I) is as follows:

wherein R is selected from the group consisting of H [hydrogen] and F [fluoro].

13. The Cheng '806 specification tells us that (Ex 2002, page 7):

Unless indicated to the contrary, whenever 3'-thia-2', 3'-dideoxycytidine without a plus or minus sign before it is stated herein, it is understood that such means (+-)3'-thia-2",3'-dideoxycytidine ***.

14. Cheng '617 makes the following observation (Ex 2001, [FN3] renumbered pages 0012-0013-11) (indentation and paragraph numbering in brackets added):

The present invention concerns a method involving the administration of

[1] 3'-thia-2',3'-dideoxycytidine,

[2] 3'-thia-2',3'-dideoxycytidine

*** (referred to herein as "the compounds of formula (I)" or a salt or ester thereof, alone or in admixture with a pharmaceutically acceptable carrier in order to treat patients suffering from hepatitis B virus or to prevent hepatitis B virus infection.

Formula (I) is as follows:

wherein R is selected from the group consisting of H [hydrogen] and F [fluoro].

As referred to herein, formula (I) refers to either or both of the above structures or a mixture thereof.

Testimony

15. Both Furman and Cheng presented testimony of scientists.

16. Dr. John J. Partridge testified on behalf of Furman (Ex 2004 and reply declaration).

17. Cheng elected not to cross-examine Dr. Partridge.

18. Dr. Jonathan S. Dordick testified on behalf of Cheng (Ex 1001).

19. Furman elected not to cross-examine Dr. Dordick.

20. On this record, it should be manifest even to the casual observer that Furman and Cheng use different chemical terminology to describe what is the same "compound"--at least in the generic sense and putting aside possible stereoisomers of the "compound."

21. Dr. Partridge correctly testifies that 1-(2-(hydroxymethyl)-1,3- oxathiolan-5-yl)-cytosines (the terminology used by Furman) can also be called 3'-thia-2',3¢ =BQP:0032¢ ='-dideoxycytidine (the terminology used by Cheng) (ex 2004, renumbered page 0008).

22. Dr. Partridge further correctly testifies that the "compound" 1-(2- (hydroxymethyl)-1,3-oxathiolan-5-yl)-cytosine (again, the terminology used by Furman) and the "compound" 3'-thia-2',3¢ =BQP:0036¢ ='-dideoxycytidine (again the terminology used by Cheng) can exist as four stereo isomers and as two racemates (Ex 2004, renumbered page 0007).

23. As explained by Dr. Partridge, the Furman "compound" and the Cheng "compound" (i.e., the same compound) exists in six stereo isomeric forms (Ex 2004, page 4):

(1) two enantiomers of the cisisomers;

***1674** (2) two enantiomers of the transisomers; and

(3) a cisracemate; and

(4) a transracemate. cisand two transenantiomers because the "compound" has two chiral "centers," i.e., the two carbon atoms on either side of the oxygen (O) in the 5-member ring portion.

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24. Dr. Partridge supports his explanation graphically with the following depiction of the chemical structures of the various stereo isomers (Ex 2004, page 5):

where R is H (hydrogen).

25. Dr. Partridge tells us the following with respect toCompound B shown in his graph (Ex 2004, page 7):

Compound B is named (-) - cis-1- (2-(hydroxymethyl)-1,3-oxathiolan-5yl) cytosine and is also known as (2R, cis-4-amino-1-(2-hydroxymethyl-1,3- oxathiolan-5-yl)-(1H)-pyrimidin-2-one or lamivudine. Compound B is an active ingredient in the marketed drugs COMBIVIR , EPIVIRand EIPVIR-HBV .

26. According to Dr. Partridge, the Cheng '806 application is directed to a compound named " (-)3'-thia-2',3'-dideoxycytidine" and when the name of the compound is considered in light of chemical structures in the '806 application, the named compound "defines one of the two trans stereoisomeric forms of 1-(2- (hydroxymethyl)-1,3-oxathiolan-5yl) cytosine" (Ex 2004, page 13).

27. Further according to Dr. Partridge, Formula (I) of the Cheng '617 application represents (Ex 2004, page 8):

one stereoisomer of 1-(2-(hydroxymethyl)-1,3-oxathiolan-5yl) cytosine called "3'-thia-2',3' -dideoxycytidine" and one trans stereoisomer of 1-(2-(hydroxymethyl)-1,3-oxathiolan-5yl) cytosine, respectively. Therefore the Cheng '617 (FE 2001 [i.e., Ex 2001]) application teaches the ordinary artisan that administration of either or both of these two compounds having the formula (I) is useful for the treatment of HBV infection.

28. Dr. Partridge alleges that (Ex 2004, page 15):

one of ordinary skill in the art would not have known from the *** disclosures contained in both the '617 *** and '806 *** applications that cis-1-(2-(hydroxymethyl)-1,3-oxathialan-5-yl) cytosine *** and (-)-cis-1-(2- (hydroxymethyl)-1,3-oxathiolan-5-yl) (cytosine (Compound B) are useful in the treatment of HBV infections.

29. Dr. Partridge does not appear to have been educated by counsel for Furman as to the breadth of Count 1.

30. In particular, it is not apparent on this record that Dr. Partridge considered the scope of that portion of Count 1 represented by Furman claim 2.

31. Dr. Partridge appears to have assumed that the invention involved in this case is limited to a cis-stereoisomer, possibly because various cis-stereoisomers are commercially important.

32. However, included within the scope of Count 1 are the trans stereoisomers and the Furman specification states that the trans form of the compound is useful for treating HBV (see Finding 7).

33. Both Cheng '806 and Cheng '617 include drawings containing Figs. 1-54 [FN4] (Ex 2001, renumbered pages 0008 through 0010; 0055 through 0059; Ex 2002, renumbered pages 0011 through 0013 and 0069 through 0071).

34. Insofar as we can tell, Dr. Partridge does not discuss the drawings and related discussion in the specification of the '806 and '617 applications.

***1675** 35. Example 12 of '806 and Example 11 of '617 contain the following discussion:

2.2.15 cell lines was used to evaluate the antiviral activities of *** 3'- thia-2',3'-dideoxycytine (SddC).

* * *

The antiviral effects were measured by analysis of extracellular HBV DNA (Fig. 1). The experiment revealed that the amount of extracellular HBV DNA decreased in a dose dependent manner. The inhibitory concentration for a 50% decrease in viral replication (BHID50) *** is presented in Table 1. At [a] concentration of 2 <<mu>>M, *** 3'-thia 2' ,3'-dideoxycytidine completely inhibited the replication of HBV.

36. According to Table 1 (e.g., Ex 2001, renumbered page 0045), 3'-thia-2', 3"-dideoxycytine produced the following numerical results:

37. While each party had an opportunity to do so, neither attempted to repeat the tests described in the Examples, Table 1 and Fig. 1 of the drawings to determine which isomer or racemic mixture would inherently produce the results set out in Table 1 and Fig. 1 of the drawings.

38. Accordingly, while we credit the testimony of

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Dr. Partridge to the extent he explains stereoisomeric chemistry; we decline to credit his testimony to the extent Furman relies on that testimony to establish that Cheng '806 and '617 do not describe an embodiment within the scope of Count 1.

Adjudicatory findings

39. Furman has not established as a matter of fact that Cheng '806 does not describe an embodiment within the scope of Furman claim 2 and therefore does not describe an embodiment within the scope of Count 1.

40. Furman has not established as a matter of fact that Cheng '617 does not describe an embodiment within the scope of Furman claim 2 and therefore does not describe an embodiment within the scope of Count 1.

E. Discussion

1.

[2] As noted earlier, a party is entitled to benefit for the purpose of priority if its earlier application describes an embodiment within the scope of the count. As our findings make clear, Furman has failed to establish that Cheng '806 and '617 do not describe embodiments within the scope of Count 1. Hunt v. Treppschuh,523 F.2d 1386, 1389, 187 USPQ 426, 429 (CCPA 1975).

Insofar as we can tell, Furman's preliminary motion makes no attempt to establish that Cheng does not describe an embodiment within the scope of Furman claim 2 which is within the scope of Count 1. We recognize that Dr. Partridge has testified that he believes that the Cheng benefit applications do not describe specific isomers, albeit he concedes certain isomers are described. Dr. Partridge does not purport to have first-hand knowledge of the tests described in Example 11 of '617 and Example 12 of '806 or of the Table presented in Table 1 and Fig. 1 of the drawings. We find no analysis of that data by Dr. Partridge. In particular, we note that on the record, despite an opportunity to do so, Furman has not established that no relevant isomer or racemes mixture is inherently in the examples, Table 1 and Fig. 1. Accordingly, Furman has failed to prima facieestablish, as was its burden, that Cheng should not have been accorded benefit for the purpose of priority of the Cheng '806 and '617 applications. Furman Preliminary Motion 1 should be denied.

2.

Furman and Dr. Partridge have construed Count 1 too narrowly. Contrary to the assertion in Furman's preliminary motion, to be accorded benefit for the purpose of priority Cheng does not have to establish that one or more of its claims involved in the interference are described in the Cheng '806 and '617 applications. A description of an enabled embodiment is sufficient.

***1676** At oral argument, counsel for Furman argued that only the cisform is operative and that the cisform is commercially significant. An argument made for the first time at oral argument comes too late. LeVeen v. Edwards, 57 USPQ2d 1406, 1414 (Bd. Pat. App. & Int. 2000); Packard Press Inc. v. Hewlett-Packard Co.,227 F.3d 1352, 1360, 56 USPQ2d 1351, 1356 (Fed. Cir. 2000); Henry v. Department of Justice,157 F.3d 863, 865 (Fed. Cir. 1998). Had Furman timely made the argument, Cheng might have provided evidence to the contrary. In this particular case, the Furman specification itself provides an answer inasmuch as it indicates that both the cisand transforms of the compound are within the scope of the Furman invention, an invention said to involve compounds useful for treating hepatitis B. In this case, we believe Furman should have to live with the representations made in its specification. Cf. Power Patents Co. v. Coe, 110 F.2d 550, 551, 44 USPQ 389, 390 (D.C. Cir. 1940) (if a feature is inherent in a disclosed process, the applicant may claim the feature although he does not in terms disclose it;court was not inclined to extend this principle to a case in which the language of the disclosure negatives the feature which is now claimed to inhere in it); Chemithon Corp. v. The Procter & Gamble Co.,287 F. Supp. 291, 304, 159 USPQ 139, 150 (D. Md. 1968) (same). Moreover, we note that Dr. Partridge never alleges that the trans form of the compound will not function as an HBV inhibitor.

Counsel for Furman may have reason to believe that the cisform is preferred. The Furman Specification would confirm counsel's belief (page 3, lines 1-2). Nevertheless, Furman claim 2 cannot properly be construed, when considered in light of the Furman specification, to be limited to a cisembodiment, as was suggested at oral argument.

In this case, and if Furman believed the cisembodiment is patentably distinct from the transor racemate embodiments, Furman had an opportunity

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to file a preliminary motion to seek to narrow the count to the cisembodiment or to add a second count limited to the cisembodiment and to argue that Cheng would not have been entitled to benefit for the purpose of priority as to the narrow cis count. 37 CFR § 1.633(c). Furman did not take advantage of the opportunity offered to it by the rules. Accordingly, we have no occasion to make any findings or conclusions of law, in this case, as to whether a narrow count would have been appropriate or whether any cisform is patentably distinct from any trans or racemic form of the compound.

F. Order

Upon consideration of Furman Preliminary Motion 1, and for the reasons given, it is

ORDERED that the motion is denied.

FN1. Furman claim 3 is directed to a methyl substitute compound, which probably is not described in the '806 and '617 applications given its definition of R as limited to hydrogen (H) and fluoro (F).

FN2. The Furman specification has not been made an exhibit by either party. Nevertheless, it is part of the record in this particular interference. 37 CFR § 1.671(a)(1) (2000). Rule 671(a) was recently amended. Final Rule, Simplification of Certain Requirements in Patent Interference Practice, 65 Fed.Reg. 70489, 70490 (Nov. 24, 2000). In the future in this and other interferences, all evidence must be presented in the form of an exhibit.

FN3. Furman presented Ex 2001 which includes the '617 specification drawings. Ex 2001 is not a full and correct reproduction of the '617 specification inasmuch as the top portion of numerous pages is missing. The copies of the drawings are not clear. Where necessary we have consulted the actual specification.

FN4. Cheng '806 includes other figures in its drawings.

P.T.O. Bd.Pat.App. & Int.

59 U.S.P.Q.2D 1668

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872 F.2d 1008
57 USLW 2659, 10 U.S.P.Q.2d 1614
(Cite as: 872 F.2d 1008)

United States Court of Appeals,
Federal Circuit.

In re Jacques GOSTELI, Ivan Ernest and Robert B. Woodward.

No. 88-1611.

April 24, 1989.
Suggestion for Rehearing In Banc Declined Jan. 11, 1989.
Rehearing Denied May 18, 1989.
Suggestion for Rehearing In Banc Declined July 6, 1989.

Appeal was taken from a decision of the Patent and Trademark Office Board of Patent Appeals and Interferences affirming examiner's final rejection of claims and application for patent disclosing bicyclic thia-aza compounds containing beta-lactam ring unsubstituted in beta-position and having antibiotic properties. The Court of Appeals, Bissell, Circuit Judge, held that applicants were not entitled to benefit of foreign priority date, and without foreign priority date, application had to be rejected as being anticipated.

Affirmed.

West Headnotes

[1] Patents k51(1)
291k51(1)

Issuance of patent is barred if its generic claims were anticipated by prior art disclosing individual chemical species. 35 U.S.C.A. § 102(e).

[2] Patents k90(1)
291k90(1)

Reference to "invention" in statute, providing that application for patent filed in United States by any person who has previously filed application for a patent for same invention in foreign country shall have same effect as application would have if filed in United States on date on which application was first filed in foreign country, refers to what claim is defined, not what is disclosed in foreign application. 35 U.S.C.A. § 119.

[3] Patents k90(5)
291k90(5)

Patent applicants could not rely on foreign application for constructive reduction to practice date for two chemical species at issue for patent disclosing bicyclic thia-aza compounds. Practice Rules in Patent Cases, §§ 1.131, 1.131(b), 35 U.S.C.A.App.

[4] Patents k66(1.3)
291k66(1.3)

Applicants for patent disclosing bicyclic thia-aza compounds containing beta- lactam ring unsubstituted in beta-position and having antibiotic properties were not entitled to benefit of foreign priority date and without foreign priority date, application had to be rejected as being anticipated; foreign priority application did not support what was claimed in United States application. 35 U.S.C.A. §§ 102(e), 119.

***1009** Bruce M. Collins, Mathews, Woodbridge, Goebel, Pugh & Collins, P.C., Morristown, N.J., argued for appellant.

Fred E. McKelvey, Sol., Com'r of Patents and Trademarks, Arlington, Va., argued for appellee. With him on the brief were Charles E. Van Horn, Deputy Sol., John W. Dewhirst and Harris A. Pitlick, Associate Sol.

Raymond C. Stewart, Birch, Stewart, Kolasch & Birch, Falls Church, Va., was on the brief for amicus curiae, Kitamura et al.

Before BISSELL and ARCHER, Circuit Judges, and RE, Chief Judge. [FN*]

FN* The Honorable Edward D. Re, Chief Judge, United States Court of International Trade, sitting by designation pursuant to 28 U.S.C. § 293(a) (Supp. IV 1986).

BISSELL, Circuit Judge.

DECISION

The decision of the United States Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences (Board), Appeal No. 665-18 (June 30, 1988), affirming the examiner's final rejection of claims 48-51 in the patent application, Serial No. 423,348, of Jacques Gosteli, Ivan Ernest and Robert B. Woodward [hereinafter Gosteli or Applicants], under 35 U.S.C. § 102(e) (1982), is affirmed.

BACKGROUND

Gosteli's patent application discloses bicyclic thia-aza compounds containing a beta-lactam ring unsubstituted in the beta-position and having antibiotic properties. The claimed compounds are chemical intermediates used in the preparation of antibiotics known as 2-penems. Claims 48 (see Appendix A) and 49 are Markush-type genus claims, and dependent claims 50 (see Appendix A) and 51 are subgenus claims, each consisting of 21 specific chemical species. The examiner rejected claims 48-51 under section 102(e) as being anticipated by United States Patent No. 4,155,912 (Menard). Menard discloses, but does not claim, a first species, 2-[(4R,S)-4-Acetylthio-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*-nitrobenzyl ester, that is within the scope of claims 48 and 50, and a second species, 2-[(4R,S)-4-Acetylthio-2-oxo-1-azetidinyl]-2-chloroacetic acid *p*-nitrobenzyl ester, that is within the scope of claims 49 and 51.

Attempting to antedate Menard, Gosteli claimed the benefit, under 35 U.S.C. § 119 (1982), of their Luxembourg patent application's foreign priority date. The disclosure of the Luxembourg application is not as complete as that of Gosteli's United States application. The Luxembourg application discloses a subgenus of the genus claimed in the United States application and specifically describes the two chemical species disclosed by Menard. Menard's effective date is December 14, 1977, seven months after the May 9, 1977, filing date of Gosteli's Luxembourg application, but five months before Gosteli's May 4, 1978, United States filing date. Thus, Menard is not an effective reference under section 102(e) if Applicants are entitled to their Luxembourg priority date.

The Board denied Gosteli the benefit of their Luxembourg priority date reasoning that:

> [Gosteli's] problem in attempting to antedate the Menard reference is that their Luxembourg priority application does not disclose the "same invention" in a manner that complies with the first paragraph of 35 USC 112 as is claimed in the claims on appeal (48-51). In other words claims 48-51 contain considerable subject matter which is not specifically disclosed in the Luxembourg application.
>
>
>
> ***1010** Since [Gosteli's] Luxembourg application does not provide a written description of the entire subject matter set forth in the appealed claims 48-51, as required by the first paragraph of 35 USC 112, we have concluded that claims 48-51 have an effective filing date as of the May 4, 1978 filing date of [Gosteli's] grandparent application Serial No. 902,639, and not as of the Luxembourg filing date. Accordingly, [Applicants have] not antedated the Menard reference.

Gosteli, Appeal No. 665-18, slip op. at 2, 3.

Alternatively, Gosteli attempted to swear behind Menard by using declarations submitted under 37 C.F.R. § 1.131 (1988) (Rule 131). The Board rejected the use of Rule 131, because "the declaration does not ... contain 'facts showing a completion of the invention in this country before the filing date of' Menard." *Gosteli,* Appeal No. 665-18, slip op. at 4. Gosteli appeals from the Board's decision, and the Institute of Bio-Active Science, Nippon Zoki Pharmaceutical Co., Ltd., filed an amicus curiae brief.

ISSUES

1. Whether claims 48-51 are entitled, under section 119, to the benefit of a foreign priority date.

2. Whether Rule 131 allows Gosteli to swear behind the two chemical species disclosed in Menard by establishing a constructive reduction to practice in this country based on Gosteli's foreign priority date of those two species.

3. Whether Gosteli's Luxembourg priority application provides a written description sufficient to support the entire subject matter of claims 48-51, as required by 35 U.S.C. § 112, ¶ 1 (1982).

OPINION

I. Section 119

[1] Claims 48-51 of Gosteli's application stand rejected under section 102(e) as anticipated by Menard. The two chemical species disclosed by Gosteli's Luxembourg priority application are disclosed by Menard and also fall within the scope of the claims on appeal. Section 102(e) bars the issuance of a patent if its generic claims are

anticipated by prior art disclosing individual chemical species. *See, e.g., In re Slayter,* 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960) (stating that species anticipate a generic claim). The parties agree that Menard is an effective anticipatory prior art reference unless Applicants are entitled to their Luxembourg priority date.

Generally, an applicant may antedate prior art by relying on the benefit of a previously filed foreign application to establish an effective date earlier than that of the reference. *See* 35 U.S.C. § 119; *In re Wertheim,* 541 F.2d 257, 261, 191 USPQ 90, 95-96 (CCPA 1976); Rollins, *35 USC 119- Description and Enablement Requirements,* 67 J.Pat.Off.Soc'y 386, 386 (1985). Under section 119, the claims set forth in a United States application are entitled to the benefit of a foreign priority date if the corresponding foreign application supports the claims in the manner required by section 112, ¶ 1. *Wertheim,* 541 F.2d at 261-62, 191 USPQ at 95-96; *Kawai v. Metlesics,* 480 F.2d 880, 887-89, 178 USPQ 158, 164-65 (CCPA 1973).

[2] Gosteli contends that their rights under section 119 are determined by focusing on (1) what is the subject matter disclosed in the Luxembourg priority application, and (2) whether that subject matter removes Menard. We disagree with Gosteli's reading of section 119. The statute provides, in pertinent part:

> An application for patent for an invention filed in this country by any person who has ... previously regularly filed an application for a patent for the same invention in a foreign country ... shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country....

35 U.S.C. § 119. The reference to the "invention" in section 119 clearly refers to what the claims define, not what is disclosed in the foreign application. *Cf. In re Scheiber,* 587 F.2d 59, 61, 199 USPQ 782, ***1011** 784 (CCPA 1978) (stating that "invention" as used in 35 U.S.C. § 120 (Supp. IV 1986), refers to what is claimed). Section 119 provides that a foreign application "shall have the same effect" as if it had been filed in the United States. 35 U.S.C. § 119. Accordingly, if the effective filing date of what is claimed in a United States application is at issue, to preserve symmetry of treatment between sections 120 and 119, the foreign priority application must be examined to ascertain if it supports, within the meaning of section 112, ¶ 1, what is claimed in the United States application. *Compare Kawai,* 480 F.2d at 886, 178 USPQ at 162-63 (construing the section 112, ¶ 1 requirements of section 119) *with Scheiber,* 587 F.2d at 62, 199 USPQ at 784-85 (construing the section 112, ¶ 1 requirements of section 120).

At oral argument, the government conceded that if Gosteli claims the species disclosed in the Luxembourg application they would be entitled to the foreign priority date with regard to those claims. Thus, Menard would be ineffective as a reference against those claimed species, or any other claim properly supported by the Luxembourg disclosure as required by section 112, ¶ 1. We conclude, therefore, that claims 48-51 are entitled to the benefit of their foreign priority date under section 119 only if the foreign priority application properly supports them as required by section 112, ¶ 1. An application relying on the benefit of an earlier filing date in the United States would receive the same treatment under 35 U.S.C. § 120. *See Kawai,* 480 F.2d at 886, 178 USPQ at 163.

"In re Ziegler"

The Federal Circuit has adopted as precedent the decisions of the Court of Customs and Patent Appeals (CCPA). *See South Corp. v. United States,* 690 F.2d 1368, 1369, 215 USPQ 657, 657 (Fed.Cir.1982). The government urges on appeal that *In re Ziegler,* 347 F.2d 642, 146 USPQ 76 (CCPA 1965), should be overruled as in conflict with *Wertheim, Kawai, Scheiber,* and *In re Smyth,* 189 F.2d 982, 90 USPQ 106 (CCPA 1951). According to the government, *Ziegler's* fundamental premise is that a foreign application need show support for only so much of the claimed invention as is disclosed in the prior art reference to achieve a priority date for the entirety of the claimed invention. *Accord In re Kitamura,* 9 USPQ2d 1787 (Bd.Pat.App.Int.1988) (providing an extensive discussion by an expanded Board on the same issue).

Ziegler never mentions section 112 by name in its analysis of section 119, and yet the application of section 112 to section 119 had already been set forth in *Smyth. See Kawai,* 480 F.2d at 887-89, 178 USPQ at 163-65; *see also* Rollins, *35 USC 119-Description and Enablement Requirements,* 67 J.Pat.Off.Soc'y at 391-92 (discussing *Smyth*). We conclude that *Ziegler* did not examine section 112 compliance because the issue was not in dispute. The court stated that "[t]here is no question here that the [foreign priority] applications adequately support the broad claims, once the references have been

antedated as to the narrow subject matter which they disclose." *Ziegler,* 374 F.2d at 650, 146 USPQ at 82-83. In other words, all claims in the United States application were properly supported, as required by section 112, ¶ 1, by Ziegler's foreign priority applications. Furthermore, both *Kawai,* 480 F.2d at 889, 178 USPQ at 165, and *Wertheim,* 541 F.2d at 262 n. 6, 191 USPQ at 96 n. 6, cite *Ziegler;* neither case recognizes a conflict nor an inconsistency.

However, we agree with the government that there is inconsistent language in these decisions. To the extent that *Ziegler's* language is inconsistent with that in *Kawai, Wertheim,* and *Scheiber,* that inconsistency has already been *sub silentio* removed. The CCPA's later decisions control because that court always sat *en banc.* Accordingly, we conclude that no conflict currently exists.

II. Rule 131

[3] As an alternative position, Gosteli contends that they can swear behind Menard, under Rule 131, by establishing a constructive reduction to practice in this country based on their foreign priority date of the two species disclosed by Menard. ***1012** They reason that the use of a foreign priority date to establish the reduction to practice component for a Rule 131(b) showing is authorized by *In re Mulder,* 716 F.2d 1542, 1544-46, 219 USPQ 189, 192-94 (Fed.Cir.1983), and therefore, showing priority with respect only to as much of the invention as Menard discloses is needed. Gosteli cites the rationale in *In re Stempel,* 241 F.2d 755, 760, 113 USPQ 77, 81 (CCPA 1957), in support of their reasoning. We disagree.

Rule 131 requirements are quite specific. To antedate a prior art reference, the applicant submits an oath or declaration alleging acts that establish a completion of the *invention in this country* before the effective date of the prior art. 37 C.F.R. § 1.131(a).

The requirements and operation of section 119 differ from those of Rule 131. *Cf. Scheiber,* 587 F.2d at 61-62, 199 USPQ at 784 (explaining a similar contrast between section 120 and Rule 131). Rule 131 provides a mechanism for removing specific prior art references, whereas section 119 is concerned only with an applicant's effective filing date. *Cf. id.* Because section 119, unlike Rule 131, operates independently of the prior art, it is appropriate that the showing required under section 119 differs from that required under Rule 131. *Cf. id.*

This case is distinguishable from *Mulder.* Gosteli's declarations make no mention of acts in this country. Gosteli relies on their Luxembourg application for a constructive reduction to practice date for the two chemical species at issue. That reliance is misplaced. *Mulder* is not purely a section 119 case. In *Mulder,* the conception date was based on activity in the United States, a date earlier than the prior art. Mulder was permitted to establish a constructive reduction to practice date based on his foreign filing. However, the constructive reduction to practice date was after the prior art. Rule 131 permitted Mulder to swear behind the reference, from the constructive reduction to practice date back to his conception date. The use of a foreign filing date in such circumstances is not inconsistent with our decisions. In *Mulder,* there was no dispute about compliance with the section 112 requirements subsumed in section 119. *See Mulder,* 716 F.2d at 1543, 219 USPQ at 191 (stating that "[t]here is no question that applicants complied with all the formalities required by § 119 and related PTO rules").

Gosteli does not point to any activity inside the United States. Furthermore, Gosteli would not need activity in this country if section 119 gave them the benefit of an effective foreign filing date prior to Menard. Under these circumstances, Rule 131 is irrelevant. Thus, we affirm the Board; Gosteli cannot use the Rule 131 declarations filed to swear behind Menard.

III. Written Description Requirement

[4] The Board found that Gosteli's Luxembourg application did not provide a sufficient written description of the entire subject matter of claims 48-51, as required by the first paragraph of section 112, *Gosteli,* Appeal No. 665-18, slip op. at 3, and, accordingly, section 119 was not effective to antedate Menard. Although Gosteli does not have to describe exactly the subject matter claimed, *In re Lukach,* 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971), the description must clearly allow persons of ordinary skill in the art to recognize that Gosteli invented what is claimed. *Wertheim,* 541 F.2d at 262, 191 USPQ at 96. We review this factual inquiry under the clearly erroneous standard. *See id.*

"[T]he PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims." *Id.* at 263, 191 USPQ at 97. In this case, the PTO has met that burden by pointing out a number of differences between what is disclosed in the Luxembourg priority

application and what is claimed in Gosteli's United States application. Gosteli does not dispute that additional subject matter is present in the United States application. Accordingly, the Board's findings are not clearly erroneous.

The Board's decision is

AFFIRMED.

***1013** APPENDIX A

Representative claims 48 and 50 of the Gosteli application are set forth below.

48. Compounds of the formula

Image 1 (1.75□ X 2.75□) Available for Offline Print

in which

Z' represents oxygen, sulphur or a methylidene group optionally mono- or di- substituted by lower aklyl, cycloalkyl, cycloalkyl-lower alkyl, phenyl, phenyl- lower aklyl or esterified carboxy,

R sub1 represents hydrogen; lower aklyl; lower aklyl monosubstituted by

hydroxy, lower alkoxy, lower alkanoyloxy, halogen, mercapto, lower aklylthio, carboxyl, carbamoyl, cyano, nitro, amino, amino mono- or di-substituted by lower alkyl, lower alkyleneamino or amino acylated by acetyl, phenoxyacetyl, tert.butoxy-carbonyl, benzyloxycarbonyl or p-nitrobenzeyl-oxycarbonyl;

carboxyl; protected carboxyl; aminocarbonyl; aminocarbonyl mono- or di- substituted by lower alkyl; cycloalkyl; cyclo-alkyl-lower alkyl; phenyl; naphthyl; phenyl-lower alkyl; phenyl, naphthyl or phenyl-lower alkyl mono- substituted by

lower alkyl, lower alkoxy, halogen, nitro, amino or di-lower alkylamino;

pyridyl; thienyl; furyl; pyridyl-lower alkyl; thienyl-lower alkyl; furyl-lower alkyl; lower alkylthio; lower alkenylthio; cycloalkylthio; cycloalky-lower alkylthio; phenylthio; phenyl-lower alkylthio; or lower alkylthio, lower alkenylthio, cycloalkylthio, cycloalkyl-lower alkyl-thio, phenylthio or phenyl-lower alkylthio monosubstituted by

hydroxy, lower alkoxy, lower alkanoyloxy, halogen, mercapto, lower alkylthio, carboxyl, carbamoyl, cyano, nitro, amino, amino mono- or di-substituted by lower alkyl, lower alkanoylamino or lower alkyleneamino; and

R sub2 A together with the carbonyl grouping -C(= 0)- to which it is attached represents a protected carboxyl group, in racemic or optically active form.

50. A compound of the formula (V) according to claim 48 selected from the group consisting of

2-[(4R,S)-4-Acetylthio-2-oxo-1-azetidinyl]-2-hydroxy acetic acid *p*- nitrobenzyl ester,

2-[(4R,S)-4-Phenylacetylthio-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*- nitrobenzyl ester,

2-[(4R,S)-4-(2-Furoylthio)-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*- nitrobenzyl ester,

2-[(4R,S)-4-(3-Dimethylaminobenzoylthio)-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*-nitrobenzyl ester,

2-[(4R,S)-4-(3-Methoxycarbonylpropionylthio)-2-oxo-1-azetidinyl]-2- hydroxyacetic acid *p*-nitrobenzyl ester,

2-[(4R,S)-4-Benzoylthio-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*- nitrobenzyl ester,

2-[(4R,S)-4-Acetoxyacetylthio-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*- nitrobenzyl ester,

2-[(4R,S)-4-Hexanoylthio-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*- nitrobenzyl ester,

2-[(4R,S)-4-tert.-Butylthioacetylthio-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*-nitrobenzyl ester,

2-[(4R,S)-4-(4-*p*-Nitrobenzyloxycarbonylaminobutyrylthio)-2-oxo-1- azetidinyl]-2-hydroxyacetic acid *p*-nitrobenzyl ester,

2-[(4R,S)-4-(3-*p*-Nitrobenzyloxycarbonylaminopropionylthio)-2-oxo-1- azetidinyl]-2-hydroxyacetic acid *p*-nitrobenzyl ester,

2-[(4R,S)-4-(4-Benzyloxycarbonylaminobuytrylthio)-2-oxo-1-1-azetidinyl]-2- hydroxyacetic acid *p*-nitrobenzyl ester,

***1014** 2-[(4R,S)-4-[2-(2-Phenoxyacetylamino)-acetylthio]-2-oxo-1- azetidinyl]-2-hydroxyacetic acid *p*-nitrobenzyl ester [sic]

2-[(4R,S)-4-Ethylthiothiocarbonylthio-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*-nitrobenzyl ester [sic]

2-[(4R,S)-4-(cis-2-methoxycarbonylvinylthio)-2-oxo-1-azetidinyl]-2- hydroxyacetic acid acetonyl ester,

2-[(4S)-4-(cis-2-(1)-menthyloxycarbonylvinylthio)-2-oxo-1-azetidinyl]-2- hydroxyacetic acid acetonyl

ester,
2-[
(4R)-4-(cis-2-(1)-menthyloxycarbonylvinylthio)-2-oxo-1-azetidinyl]-2- hydroxyacetic acid acetonyl ester,
2-[
(4S)-4-(trans-2-(1)-menthyloxycarbonylvinylthio)-2-oxo-1-azetidinyl]-2- hydroxyacetic acid acetonyl ester,
2-[
(4R)-4(trans-2-(1)-menthyloxycarbonylvinylthio)-2-oxo-1-azetidinyl]-2- hydroxyacetic acid acetonyl ester,
2-[
(4R)-4-acetylthio-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*-nitrobenzyl ester, and
2-[
(4R,S)-4-(nicotinoylthio)-2-oxo-1-azetidinyl]-2-hydroxyacetic acid *p*- nitrobenzyl ester.

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90 F.2d 103
33 U.S.P.Q. 506
(Cite as: 24 C.C.P.A. 1194, 90 F.2d 103)

Court of Customs and Patent Appeals.

HULL
v.
DAVENPORT.

Patent Appeal No. 3800.

May 29, 1937.

Appeal from the Board of Patent Appeals, Interference No. 66,481.

Interference proceeding between Harry B. Hull and Ransom L. Davenport. From a decision of the Board of Appeals of the Patent Office reversing a decision of the examiner of interferences awarding priority of invention to Hull, Hull appeals.

Affirmed.

West Headnotes

[1] Patents k90(3)
291k90(3)

Whether first conceiver used reasonable diligence in reducing to practice, as required by statute relating to infringement suits, so as to bar rights of second conceiver who made prior reduction to practice, depends upon particular facts of individual case. 35 U.S.C.A. § 69.

[2] Patents k90(2)
291k90(2)

Under statute permitting defense in patent infringement suit that patentee obtained patent for that which was invented by another who was using reasonable diligence in adapting and perfecting the same, first conceiver must use reasonable diligence to protect rights, since purpose of statute is not alone to reward first conceiver, but also to give public advantage of discovery as soon as reasonably possible. 35 U.S.C.A. § 69.

[3] Patents k90(2)
291k90(2)

A first conceiver who is last to reduce to practice must couple his conception to his reduction to practice with reasonable diligence only from time just prior to second conceiver's entrance into field to first conceiver's reduction to practice.

[4] Patents k91(3)
291k91(3)

Evidence of first conceiver's reasonable diligence from time just prior to second conceiver's entrance into field to first conceiver's reduction to practice may be shown by affirmative acts or acceptable excuses or reasons for failure of action.

[5] Patents k90(3)
291k90(3)

A first conceiver cannot account for failure to reduce invention to practice for unreasonable time by showing that he merely turned matter over to attorney, if attorney was guilty of inexcusable lack of diligence.

[6] Patents k91(1)
291k91(1)

In patent interference proceeding, prior conceiver who was last to reduce to practice had burden of affirmatively showing reasonable diligence in reducing to practice, from time just prior to second conceiver's entrance into field to first conceiver's reduction to practice.

[7] Patents k91(3)
291k91(3)

Evidence showing that first conceiver submitted invention to attorneys for preparation of application for patent approximately eight months before reduction to practice by filing of application, and approximately seven months before second conceiver's conception and reduction to practice, and that attorneys had several hundred similar cases, and failing to show when first conceiver's case was taken up by attorneys, did not establish first conceiver's reasonable diligence, and hence award of priority of invention to second conceiver was proper.

****103 *1194** Robert R. Candor, of Dayton, Ohio, for

appellant.

Raymond G. Mullee, of New York City, for appellee.

Before GRAHAM, Presiding Judge, and BLAND, HATFIELD, GARRETT, and LENROOT, Associate Judges.

BLAND, Associate Judge.

This is an appeal by the party Hull from a decision of the Board of Appeals of the United States Patent Office, in which priority of invention relating to refrigerating apparatus was awarded to the party Davenport. The Board reversed the decision of the Examiner of Interferences which had awarded priority in the invention of the count to the junior party Hull.

Hull was the first to conceive and the last to reduce to practice. He was awarded **104 a date of conception of June 3, 1930, and he filed his application January 31, 1931. The party Davenport filed his application December 30, 1930, and this date is his only date for conception and reduction to practice. Neither party actually reduced the invention to practice, and both rely upon a constructive reduction to practice which consists of the filing of their respective applications.

The question of diligence of the party Hull was the only question considered by the Board and is the only question presented here.

Hull took testimony. Davenport took none. Such portions of the testimony as the parties regarded as of importance appear in the record by way of stipulation. Hull was employed in the Frigidaire department of the General Motors Corporation, and the stipulated testimony shows that the patent department of this firm prepared and delivered to a certain law firm a great number of invention files and that each file included all necessary papers and sketches relating to a separate invention; that with respect to these files the records showed that during the year 1930 the lowest number of *1195 cases of this company in the hands of said attorneys was 311 at the first part of the year and that at the end of the year there were 406 inventions then awaiting action. The instant application contained two pages of drawings and eleven pages of printed specification which included six claims. On June 3, 1930, or within a week thereafter, Hull, through a patent contact man, delivered to the said firm of attorneys the papers, sketches, etc., which were necessary for the preparation of the application for a patent on the invention here in controversy. There is nothing else shown in the record which throws any light as to what, if anything, was done with respect to the invention during the entire period of about eight months.

On the question of Hull's diligence, the Examiner of Interferences stated: 'The party Hull then has the burden of showing reasonable diligence from just before December 30, 1930, to January 31, 1931, when he filed his application. Since this involves a period of only five weeks, a period not in excess of a reasonable time in which to prepare an application taking into account press of immediate business and activity attendant upon the preparation itself, lack of reasonable diligence will not be imputed to Hull.'

Upon appeal, the Board of Appeals, with reference to the subject of diligence, said in part:

'It is unnecessary to enter into a discussion of the subject matter involved as the only question requiring consideration is that of diligence. The party Hull has been awarded June 3, 1930, as a date of conception, at about the time his invention was placed in the hands of his attorney for preparing and filing an application. That application was filed January 31, 1931. The party Davenport filed December 30, 1930. The party Hull's explanation for the delay in filing over a period of about eight months is in effect that the attorneys were preparing many applications.

'It is our judgment that substantially eight months is entirely too long a period to be accepted as a reasonable time within which to file an application in the absence of a showing of special circumstances.'

It will be noticed that the Examiner of Interferences took the position that 'only five weeks' is the period of time in which appellant is required to show diligence, while the Board took the position that Hull's attorneys had delayed filing his application for a period of about eight months after the invention had been conceived and had offered no explanation of the cause of the delay.

[1] Many cases have been cited and discussed. None of them is precisely in point. The facts with respect to diligence in each case differ from those of every other case, and necessarily the question must always be decided in the light of the particular facts in the individual case.

In Patent Office practice the rule with respect to diligence is an old one and one which we think is well

settled and generally understood by those familiar with patent law. In the Patent Act of 1836, 5 Stat. 117, provision was made for certain defenses to be set up in actions for patent infringement. Among the defenses which might be pleaded was 'that he (the patentee) had surreptitiously or unjustly obtained the patent for that which was in fact invented or discovered by another, who was using reasonable diligence in adapting and perfecting the same.' Section 15. This was, in substantially the same language, re-enacted into the Patent Act of 1870, 16 Stat. 198, 61, which became section 4920 of the Revised Statutes (35 U.S.C.A. ****105** § 69). Soon after the passage of the act of 1836, the courts were called upon in infringement suits to determine who were the first inventors of the inventions there involved. We find in the decisions from that time to this day much discussion of the question, and, while courts have used different language in stating the rule, there has been but little change in the rule as originally announced.

[2][3] Clearly it was the intent of Congress to assure the first inventor who had completed the mental act of invention that he should not be deprived of his reward by reason of delays which he could not reasonably avoid in giving his invention to the public. But we must bear in mind that it was not alone to reward the inventor that the patent monopoly was granted. The public was to get its reward and have the advantage of the inventor's discovery as early as was reasonably possible. See Robinson on Patents, Sec. 385. It will be noticed that the act of 1836, which is the genesis of the rule of diligence as applied in Patent Office practice, said: 'who was using reasonable diligence in adapting and perfecting the same.' As applied by the Patent Office and the courts in most instances, the rule has finally crystallized to be that the first conceiver who is last to reduce to practice must couple his conception to his reduction to practice with reasonable diligence. In some cases it is stated that he must so act as to make his conception of the invention and the perfecting it a single inventive act. The weight of authority, however, regards his diligence sufficiently shown if it be found that he was diligent from a time just prior to the second conceiver's entrance into the field to the first conceiver's reduction to practice either actually or constructively. Christie v. Seybold (C.C.A.) 55 F. 69; Woods v. Poor, 26 App.D.C. 397; Grundy v. Van Leir, 75 F.(2d) 503, 22 C.C.P.A.(Patents) 1034; Wilson et al. v. Shorts et al., 81 F.(2d) 755, 23 C.C.P.A.(Patents) 914.

[4] His lack of diligence from the time of conception to the time immediately preceding the conception date of the second conceiver is not regarded as of importance except as it may have a bearing upon his subsequent acts, for the reason that he has not forfeited his right to a patent by his delay when no adverse interests are involved, and it follows that his adversary should only be concerned with what happened immediately prior to and after his entry into the field. Evidence ***1197** of diligence during the critical period may be shown either by affirmative acts or acceptable excuses or reasons for failure of action. See Christensen v. Ellis, 17 App.D.C. 498.

[5] It is also well settled that the first conceiver cannot account for his failure to reduce his invention to practice for an unreasonable time after his conception by showing that he merely turned the matter over to his attorney if in fact the attorney in preparing the application and getting it into the Patent Office, showed inexcusable lack of diligence. Briggs v. Lillie et al., 1905 C.D. 168. Of course, in determining the diligence or the lack of diligence on the part of the attorney, considerations are involved unlike those in many respects which appertain to the inventor. Courts have been liberal in their holdings with respect to the length of time a busy patent attorney may take in the preparation and filing of patent applications. Farmer et al. v. Schweyer, 68 F.(2d) 961, 21 C.C.P.A.(Patents) 865. In one case, Courson v. O'Connor et al. (C.C.A.) 227 F. 890, it was held that lack of diligence will not be imputed to the attorney unless the same amounts to negligence, but the weight of authority hardly goes this far. It requires that he must show reasonable diligence (see Briggs v. Lillie et al., supra, and Martus et al. v. Heise, 39 F.(2d) 715, 17 C.C.P.A.(Patents) 1083), and that his lack of diligence must be charged against his client.

Now, measuring the facts at hand by the principles above announced, we, after most careful consideration, have arrived at the conclusion that the appellant here has not shown such reasonable diligence as the law requires and that the decision of the Board in denying the appellant priority of invention in the count at issue on account of his lack of diligence was not erroneous.

[6] The Examiner of Interferences apparently took the position (although this is not the position taken by appellant's counsel in oral argument in this court) that all appellant had to do was to account for five weeks of time and that he had done so by showing that during that period of time the application was in the hands of the attorneys who prepared and filed the

same. It is true that the critical period in the instant case in one sense is less than five weeks' time, but the rule contemplates that there must be diligence at the time or just before the second conceiver enters the field and that from this time continuing diligence **106 must be shown or lack of it satisfactorily explained. The burden was upon the appellant to affirmatively show reasonable diligence. The only act of diligence shown by appellant or his attorneys during the entire seven-month period preceding the beginning of the alleged critical date was appellant's submission to his attorneys of his invention for the preparation of *1198 an application on June 3, 1930, or, as the record shows, within a week thereafter.

[7] There is, therefore, no showing that appellant was diligently engaged in trying to perfect his invention at the time or just before the time when the appellee entered the field. We cannot presume under the facts in this case that appellant's attorneys were diligent at the time appellee entered the field nor are there any facts proven from which we may conclude that they were diligent at any particular time during the entire eight months period. Of course, they were using diligence when they were engaged in preparing the application, but when the preparation of it began has not been shown. It is not shown that the several hundred cases in the attorneys' hands were taken up in their regular order or that appellant's case was not put to one side and others preferred over it.

We are of the opinion, therefore, that it cannot be logically concluded that the appellant has shown such diligence as the law requires, and the decision of the Board of Appeals is affirmed.

*1194 Affirmed.

90 F.2d 103, 24 C.C.P.A. 1194, 33 U.S.P.Q. 506

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523 F.2d 1386
187 U.S.P.Q. 426
(Cite as: 523 F.2d 1386)

United States Court of Customs and Patent Appeals.

Charles d'A. HUNT, Appellant,
v.
Helmut TREPPSCHUH and Robert L. Hentrich, Appellees.

Patent Appeal No. 74-570.

Oct. 16, 1975.

An appeal was taken from part of decision of Board of Patent Interferences, interference No. 96,657, awarding priority of invention for process of purifying metals and alloys by heating under very low pressure to the patentees. The Court of Customs and Patent Appeals, Miller, J., held that patentees having used broad language to claim their invention had to bear consequence that parent application supported that language with variation of their specific embodiment, and count 7 was supported in parent application.

Reversed.

Rich, J., filed a dissenting opinion with whom Markey, C. J., joined.

West Headnotes

[1] Patents k90(1)
291k90(1)

Where sole question in patent interference proceeding was whether particular count of patent was supported in the parent application relied upon as a constructive reduction to practice, answer depended on whether parent application included a disclosure of an embodiment within the count that met the requirements of first paragraph of statute relating to contents of specification. 35 U.S.C.A. § 112.

[2] Patents k113(6)
291k113(6)

Jurisdiction of Court of Customs and Patent Appeals requires that it review decisions of the board of patent interferences and not merely its opinions. 35 U.S.C.A. §§ 141, 144.

[3] Patents k90(1)
291k90(1)

Where four species of heating were immediately apparent in the disclosure relied upon for support, although parent application did not recognize the criticality of one of the species of heating means it need not do so since the advantages of using that species were not recited in nor apparent from the count of patent and therefore not significantly related to sufficiency of disclosure of the parent application, and the disclosure of the four combinations of heating means in the parent application was sufficient to describe the one recited in the count; it was not necessary that party copying claim had same enabling disclosure as that supporting copied claim.

[4] Patents k90(1)
291k90(1)

Where disclosure in patent parent application is relied upon for right to make the count, the requirement of the first paragraph of statute relating to contents of specification must be satisfied for full scope of the count, but where the parent application is relied upon as prior constructive reduction to practice, the first paragraph of requirements of specification statute need only be met for an embodiment within the count; difference lies in fact that count is a vehicle for contesting priority and may not necessarily be allowable to winning party or be proper under statute. 35 U.S.C.A. § 112.

[5] Patents k90(1)
291k90(1)

Count 7 of patent relating to invention of patentee, awarded priority of invention with respect to that count, was supported in the earlier filed parent application for invention relating to the process of purifying metals and alloys by heating under very low pressure requiring awarding priority of invention to party filing earlier parent application.

Patents k328(2)
291k328(2)

3,342,250. Cited.

*1386 Larry R. Cassett, Woodbridge, N. J., atty. of record, for appellant.

Revere B. Gurley, Arlington, Va., atty. of record, for appellees.

*1387 Before MARKEY, Chief Judge, and RICH, BALDWIN, LANE and MILLER, judges.

MILLER, Judge.

[1] This appeal is from that part of the decision of the Board of Patent Interferences, which involves appellant Hunt's continuation-in-part [FN1] of an earlier filed parent application [FN2] and the patent [FN3] of appellees Treppschuh et al., awarding priority of invention with respect to count 7 to the patentees. [FN4] The sole question is whether count 7 is supported in Hunt's parent application, which is relied on as a constructive reduction to practice. The answer depends on whether the parent application includes a disclosure of an embodiment within the count that meets the requirements of the first paragraph of 35 U.S.C. § 112. *Swain v. Crittendon*, 332 F.2d 820, 51 CCPA 1459 (1964). We reverse.

FN1. Serial No. 477,357 filed July 27, 1965, for an 'Electron Beam Furnace.'

FN2. Serial No. 255,625 filed February 1, 1963, for an 'Improved High Vacuum Furnace for Continuous Zone Processing.'

FN3. U. S. Patent No. 3,342,250 issued September 19, 1967 on an application filed November 9, 1964 and claiming a convention date of November 8, 1963, for a 'Method of and Apparatus for Vacuum Melting and Teeming Steel and Steel-Like Alloys.'

FN4. Priority of invention was decided with respect to nine counts, but only the decision with respect to count 7 has been appealed.

The Invention

The invention relates to a process of purifying metals and alloys, especially steels, by heating under very low pressure. The very low pressure induces the vaporization of volatile impurities. Volatile alloying ingredients, such as manganese in steel, also vaporize when heated under very low pressure. The vaporized alloying materials are replaced during a subsequent heating step. Sufficient pressure is thereafter maintained on the melt to prevent further vaporization of alloying ingredients.

The Count

Hunt copied 7 from the Treppschuh et al. patent into his pending continuation-in-part application. The count reads as follows:

7. A method of refining metals, especially steel and alloys which includes the steps of: in a vacuum purely electron heating the melt to be refined for eliminating volatilizable impurities and subsequently stopping the said electron heating and subjecting the thus treated melt to a heating at least partially by ion beams.

This count is directed to the method of the invention in which heating under very low pressure is accomplished by first using purely electron beams, and subsequently by using at least partially ion beams.

The Board

The board found that this count describes a *batch* process as carried out in Figures 1 and 2 of the Treppschuh et al. patent and held that the count was not supported in Hunt's parent application. It reasoned that the step of stopping the electron heating requires that the electron beam means actually be turned off and that ion beams thereafter be enployed to continue the heating of the same melt. It said that the step of 'stopping the said electron heating' is a positive step in the process of the count, which is not present in a *continuous* process in which the molten metal merely flows through a furnace heated in a first section (purely) by electron beams and in a second section by ion beams; that to include such a continuous process in the count would result in an undue stretching of the language of the count beyond its clear meaning. (It is undisputed that the process disclosed in Hunt's parent application is a continuous process and not a batch process.)

OPINION

We do not agree with the reasoning of the board and are of the opinion that the *1388 circumstances here require that the term 'stopping' should be given the broadest interpretation it will reasonably support. *Buck v. Desvignes*, 489 F.2d 737, (CCPA 1973); *Henderson v. Grables*, 339 F.2d 465, 52 CCPA 920 (1964). We do not see why 'stopping the said electron heating' cannot be read on a continuous process in which the molten metal flows through a

furnace which is heated in a first section purely by electron beams and in a second section at least partially by ion beams. Theppschuh et al. have not shown us it cannot, and we can perceive no error in the statement of the examiner: 'By removing the melt the electron heating is stopped.'

[2] However, although we do not agree with the reason given by the Board of Patent Interferences in support of its decision which respect to count 7, our inquiry cannot end there. Our jurisdiction requires that we review *decisions* of the board and not merely its opinions. 35 U.S.C. §§ 141, 144. We must still determine whether the invention of count 7 is disclosed in Hunt's parent application. This application discloses a preferred structure of a continuous zone vacuum furnace that includes a high vacuum purification chamber including at least two adjacent hearth pots. A baffle permits molten material to flow between the post, but effectively divides the purification chamber into a first vacuum stage and a second vacuum stage. Varied temperature conditions may be established within the respective hearth pots through the provision of separately controlled bombardment heating sources directing beams of charged particles into the melt contained within the respective hearth pots. The application states that the bombardment sources may be of various types depending upon the pressures required within the vacuum stages of the purification chamber. The only heating means expressly disclosed for high vacuum use are electron and ion beams. ('Where high vacuums are involved, the sources are commonly provided as electron or ion guns.')

In *Smith v. Horne*, 450 F.2d 1401, 59 CCPA 712 (1971), this court held that the following disclosure was sufficient under 35 U.S.C. § 112 to support a count drawn to a method for polymerizing a monomer involving the use of titanium tetraiodide as a component of a catalyst: 'One or more chlorides of titanium or zirconium, the chlorides and iodides being preferred. . . . The tetrahalides are specially preferred.' The working example actually described a catalyst prepared from titanium tetrachloride. The above disclosure was held to be an express teaching of titanium tetraiodide, [FN5] notwithstanding the contention that the disclosure did not recognize the criticality of selecting titanium tetraiodide compared to the other 'specially preferred' catalyst components. The court reasoned that the advantages of using titanium tetraiodide were not significantly related to the sufficiency of the disclosure relied upon for support, because the advantages were not recited in the count.

FN5. One of the four 'specially preferred' tetrahalides: titanium tetrachloride, titanium tetraiodide, zirconium tetrachloride, and zirconium tetraiodide. Thus, to use the words of the dissenting opinion here, there was an 'alternative, don't-care, use-what-you-like kind of disclosure,' which expressed no preference for any of the four species.

[3] In this case, as in *Smith v. Horne*, four species are immediately apparent in the disclosure relied upon for support. [FN6] Although Hunt's parent application does not recognize the criticality [FN7] of the one ***1389** species of heating means--purely electron beams in the first chamber and ion beams (at least partially) in the second chamber--required by the count, it need not do so, because the advantages of using that species are not recited in, nor are they apparent from, the count and are not, therefore, significantly related to the sufficiency of the disclosure of Hunt's parent application. Count 7 is broad enough to read on the features ('high vacuum for purifying the melt' in the first step and 'operation at higher pressures so that highly volatile alloying constitutents can safely be added' in the second step) disclosed (but not claimed) in the Treppschuh et al. patent specification, wherein the selection of heating means is critical; and it is also broad enough to read on the process disclosed in Hunt's parent application, wherein the selection of heating means is not critical. One of ordinary skill in the art of metal refining could be expected to, without undue experimentation, arrive at the use of electron beams in the first chamber and ion beams in the second chamber using the disclosure in Hunt's parent application. Just as the disclosure of four specially preferred catalyst components in *smith v. Horne* was sufficient to describe the one recited in the count, so the disclosure of four combinations (species) of heating means in Hunt's parent application is sufficient to describe the one recited in the count. There is no requirement that the party copying a claim have the same enabling disclosure as that supporting the copied claim.

FN6. Electron-electron, electron-ion, ion-ion, and ion-electron heating means. These four species clearly appear from the *express disclosure* of ion *or* electron beam heating in two successive chambers.

FN7. The Treppschuh et al. patent *specification* (not the count) discloses that first a melting with electron beams is carried

> out to obtain the benefit of high vacuum for purifying the melt, and thereafter heating is by high pressure corpuscular beams, which include ion beams, which permits operation at higher pressures so that highly volatile alloying constituents can safely be added.

There does not appear to be any material distinction between this case and *Smith v. Horne*. While here the contested limitation relates to the specific heating means employed in the process disclosed in Hunt's parent application and recited in the count, the dispute in *Smith v. Horne* was over the specific catalyst component employed in the process of the count. In our opinion this is a distinction without a difference. In both cases a limited class of only four possible species for use in the process of the count is disclosed without preference for the one claimed. [FN8] *See Snitzer v. Etzel*, 465 F.2d 899 (CCPA 1972).

> FN8. *In re Smith*, 458 F.2d 1389, 59 CCPA 1025 (1972), relied on by the dissenting opinion, was cited by neither party here and is clearly distinguishable. The disclosure relied upon there for support for a claim of a subgenus encompassed an infinite number of sugenera.

[4] Another distinction is that Hunt's parent application is relied upon as a prior constructive reduction to practice; whereas in *Smith v. Horne* the disclosure was relied upon for a right to make the count. In the latter situation the requirements of the first paragraph of 35 U.S.C. § 112 must be satisfied for the *full scope* of the count. In the former, however, the § 112, first paragraph requirements need only be met for an *embodiment* within the count. The difference lies in the fact that a count is a vehicle for contesting priority and may not necessarily be allowable to a winning party or be proper under § 112 (*e. g.* a phantom count). *Hedgewick v. Akers*, 497 F.2d 905, 909 n. 6, (CCPA 1974). The distinction between right to make and prior constructive reduction to practice is not material here because, as in *Smith v. Horne*, the count is drawn to a *species* rather than to a genus.

[5] In view of the foregoing, we hold that count 7 is supported in Hunt's parent application. Having risked using broad language to claim their invention, Treppschuh et al. must bear the consequence that Hunt's parent application supports that language with a variation of their specific embodiment. *Hemstreet v. Rohland*, 433 F.2d 1403, 1406, 58 CCPA 743, 747 (1970).

We have considered appellant's motion, and appellees' memorandum in opposition thereto, to apportion the costs of printing certain material included in the transcript of record at appellees' request. Pursuant to Rule 5.6(c) of the rules of this court we find the material was properly included. Appellant's motion is therefore denied.

***1390** The decision of the board with respect to count 7 is *reversed.*

Reversed.

RICH, Judge, dissenting, with whom MARKEY, C. J., joins.

While I agree with the majority that the *reasoning* of the board was wrong, [FN1] I respectfully disagree with the conclusion that Hunt's parent application discloses the invention of count 7 and with the reasoning on which that conclusion is based.

> FN1. This discussion is irrelevant to the decision and superfluous.

My disagreement involves two matters: First, the way the majority goes about finding in Hunt's parent application something that is not there--which the majority opinion tacitly admits is not there; and, second, its misconstruction and misapplication of our decision in *Smith v. Horne*, 450 F.2d 1401, 59 CCPA 712 (1971), which involved a fact situation not at all comparable to the facts here. I shall discuss these matters separately.

Hunt's Parent Does Not Disclose Count 7

Count 7 defines an invention consisting of a sequence of three steps, but the critical part of it for the purposes of decision is the specific limitation that the first step is vacuum melting by 'purely electron heating.' The heating *must* be by electron heating and by electron heating *alone*. Nowhere does Hunt's parent *teach* this concept. One skilled in the art reading Hunt's parent will never learn the invention of count 7, which is a 'must' invention, not a 'may' invention. The heating in step one must be by electron heating.

The majority tacitly admits that Hunt's parent does not disclose the invention. It says (footnote omitted): * * * Hunt's parent application does not recognize the criticality of the one species

of heating means--purely electron beams in the first chamber * * * required by the count * * *.

The 'criticality' is the essence of the invention of count 7. If Hunt did not recognize it, how could be disclose it, how can others find out about it by reading his parent application, and how can that application be either support for the count or a constructive reduction to practice of a process within the count?

What the majority does it to construct a fictitious situation. As it states, according to the disclosure of the Hunt parent application 'the bombardment sources may be of *various types*, depending upon the pressures * * *. 'Where high vacuums are involved, the sources are *commonly* provided as electron *or* ion guns." (My emphasis.) The majority then takes this vague, alternative, don't-care, use-what-you-like kind of disclosure of various heating means and, by 20/20 hindsight, itself *creates* out of all the various *possibilities*, none of which is specifically taught or disclosed or conveyed to one skilled in the art by Hunt as a must, *four 'species*,' as set forth in footnote 6, in order to be able to make a forced and false comparison with the facts in *Smith v. Horne*, which did involve an express disclosure of chemical species. Hunt's parent does not disclose any such 'species.' The majority then itself *selects* one of these undisclosed 'species' of its own creation and holds that it is an 'embodiment' of the invention of count 7, necessitating an award of priority to Hunt--who admittedly did '*not recognize the criticality of the one species*,' as does the majority. (My emphasis) Priority should not be awarded to one who did not even recognize the invention.

The majority's reference to 'the disclosure of four combinations of heating means (species) in Hunt's parent application' is a reference to its own creation, not to anything Hunt disclosed. Hunt does not mention the necessity of using *any* particular sequence of steps (and count 7 calls for a specific sequence) and he does not mention the necessity of using electron beam heating in the *first* ***1391** step (and count 7 *requires* therein electron beam heating). Hunt teaches *away* from any such necessity by his express disclosure that the heating can alternatively be by the common practice of using electron *or* ion guns with high vacuum. Count 7 permits of no such alternatives. As the majority recognizes in calling it a 'species,' it is *specific*.

In effect, Hunt's parent application hands the majority (and the art) the equivalent of a child's Erector Set and the majority, having knowledge of the Treppschuh et al. disclosure and the requirements of count 7, finding all the necessary *parts* present, proceeds to construct the count, along with three other inventions. But a box of girders, nuts, and bolts with instructions to use them any way one likes is not a disclosure of any particular structure, no matter how many species *can* be constructed.

This aspect of the case involves a simple question of fact--what is disclosed--and no abstruse question of patent law. The only law involved is that the burden is on the party copying a claim from a patent to establish that he has support for it in his application. *Smith v. Wehn*, 318 F.2d 325, 50 CCPA 1544 (1963). Hunt has not sustained that burden as to his parent application.

Smith v. Horne is Not a Case in Point

The majority bases its decision on *Smith v. Horne*, supra, as if it were on all fours with the present case. By showing that the Hunt parent application does not, as a matter of *fact*, disclose the invention of count 7, I have really made unnecessary a discussion of *Smith v. Horne* or any other case in which we have found, as a matter of fact, that there is a disclosure. However, the majority seems to see some analogy with the facts in *Smith v. Horne* which compels me to conclude that they fail to see the possibly subtle but nonetheless fundamental distinction between the two fact situations. If the cited case stands for what the majority is making it stand for here, it was wrongly decided and should be overruled as misleading to the examining corps. [FN2] Finding disclosures in parent applications which are not there can lead to the issuance of many invalid patents because such findings can be used to antedate references. The significance of the majority decision here is not limited to interferences. I will therefore point out how this case differs from *Smith v. Horne*.

> FN2. The way the majority interprets *Smith v. Horne* is, in my view, contrary to this court's decision in *Prutton v. Fuller*, 230 F.2d 459, 463, 43 CCPA 831, 835-36 (1956). The court there said:
> It is clear, however, that when an applicant recites two or more lists of ingredients and indicates that any one in one list may be combined with any one in another, he is not necessarily entitled to claim any specific combination of elements which may fall within the scope of such a disclosure, and we have so held. [Authorities cited.]

Smith v. Horne, incidentally states the same burden of proof as in *Smith v. Wehn*, supra.

Preliminarily, I am unable to understand why the majority focuses so intently on this single case, involving a fact situation hardly comparable to that before us. We have subsequently given much closer attention to the problem, suggesting 'a more stringent requirement,' pointing out that this field of the law is one which must be left to case-by-case development. For instance, see Judge Lane's elaborate discussion--apparently forgotten--in a case decided 6 months after *Smith v. Horne*, in which we held the appellant could not rely on the filing date of an earlier application, even partially overruling what we said in *In re Risse*, 378 F.2d 948, 54 CCPA 1495 (1967), one of the cases relied on by appellant in *Smith v. Horne*. I refer to *In re Smith*, 458 F.2d 1389, 59 CCPA 1025 (1972), particularly part I of the opinion. *In re Smith*, does not leave *Smith v. Horne*, as a precedent of any importance. *Smith v. Horne* was still fresh in our minds when we decided *In re Smith*, yet the latter does not even mention the former.

Smith v. Horne (so denominated) was a three-party interference involving ***1392** Smith and Horne and Slocombe applications. The two appellees had similar disclosures but the court reasoned out the issue of right to make on the basis of the Slocombe application. The invention was a polymerization method utilizing a catalyst of two components, one of which was titanium tetraiodide, TiI sub4 . Polymerization is a one-step reaction, not a combination of steps as in the present case. The question was whether Slocombe and Horne disclosed such a catalyst, with specific reference to the TiI sub4 component. The board and this court both held that they did. There was no issue involving the other materials used in the reaction other than the TiI sub4 component of the catalyst. Slocombe's disclosure was that he preferred to use chlorides and iodides of titanium or zirconium and also preferred tetrahalides; the one working example disclosed TiCl sub4 . The board held, and the court agreed, that the disclosed alternative of using iodides in place of chlorides would teach one skilled in the art to use TiI sub4 and that there was support for the count and consequent right to make it. This kind of disclosure is not comparable to the nondisclosure here where Hunt's parent application expresses indifference as to the heating means used in the first step, no preference at all as to any kind of heating anywhere in the three-step process, contains no indication of the necessity for using electron beams in the first step, and where such failure of preference collides with the count 7 limitation to 'purely' electron beam heating. *Smith v. Horne* involved the application of a stated test, which the court found in *Prutton v. Fuller*, note 2, supra, namely, 'whether the application would fairly suggest to the skilled worker in the art the particular [invention] claimed, or whether the desirability of that composition could be ascertained only by extensive experimentation.' The specific example taught TiCl sub4 and taught possible substitution of iodine for chlorine (a recognized usual equivalency), or the use of TiI sub4 . This is a far cry, factually, from anything before us now. There is no analogy between this case and *Smith v. Horne* and the majority errs in finding one through the device of inventing four 'species' for Hunt of which he disclosed no appreciation.

The basic error in the majority opinion is, in my opinion, the finding of Hunt's non-existent 'disclosure of four combinations of heating means,' from which it is reasoned that he thereby disclosed the one critical combination.

Finally, I note that appellant Hunt never cited *Smith v. Horne*, nor did appellees. Perhaps they appreciated how irrelevant it is.

For the above reasons, I would affirm.

523 F.2d 1386, 187 U.S.P.Q. 426

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146 F.3d 1348
47 U.S.P.Q.2d 1128
(Cite as: 146 F.3d 1348)

United States Court of Appeals,
Federal Circuit.

Gilbert P. HYATT, Appellant,
v.
Gary W. BOONE, Cross-Appellant.

Nos. 96-1514, 96-1515.

June 17, 1998.
Rehearing Denied; Suggestion for Rehearing In Banc Declined Aug. 26, 1998.

In patent interference proceeding No. 102,598, relating to computer formed on a single integrated circuit chip, the Board of Patent Appeals and Interferences entered judgment against patentee and cancelled relevant patent claims, but also entered judgment against applicant. Patentee appealed, and applicant cross-appealed. The Court of Appeals, Pauline Newman, Circuit Judge, held that: (1) patentee's earlier-filed application did not sufficiently describe invention that was subject of interference count for purpose of establishing priority; (2) applicant's alleged technical violations of rule governing continuation applications did not warrant reversal of finding that chain of priority was not broken; (3) Board was not required to rule on patentability of applicant's claims once applicant requested conversion to statutory invention registration (SIR); and (4) Board was required to determine priority and recognize applicant's status as prior inventor.

Affirmed, modified in part.

West Headnotes

[1] Patents k90(1)
291k90(1)

First person to conceive invention is generally first inventor, for priority purposes, provided that when first to conceive invention is last to reduce it to practice, person who was first to conceive must have exercised reasonable diligence to his own actual or constructive reduction to practice, from a time prior to conception by the other. 35 U.S.C.A. § 102(g).

[2] Patents k106(3)
291k106(3)

During an interference proceeding evidence may be presented of conception, reduction to practice, and diligence, as appropriate to the positions of the parties, or a party may rely on the patent document to establish the facts of priority of invention.

[3] Patents k98
291k98

The filing of a patent application serves as conception and constructive reduction to practice of the subject matter described in the application.

[4] Patents k98
291k98

In filing of patent application, there is no need for proof or corroboration of subject matter that is included in application unless date earlier than filing date is sought to be established; thus, inventor need not provide evidence of either conception or actual reduction to practice when relying on content of patent application.

[5] Patents k106(1)
291k106(1)

When a party to an interference seeks the benefit of an earlier-filed United States patent application, the earlier application must contain a written description of the subject matter of the interference count, and must meet the requirement that the written description enables any person skilled in the art to make and use the same. 35 U.S.C.A. §§ 112, 120.

[6] Patents k113(6)
291k113(6)

Court of Appeals reviews for clear error findings of Board of Patent Appeals and Interferences as to patent application's compliance with written description requirement, which is question of fact.

[7] Patents k101(4)
291k101(4)

Patent claims as filed are part of the specification, and may provide or contribute to compliance with written description requirement. 35 U.S.C.A. § 112.

[8] Patents k106(1)
291k106(1)

For an earlier-filed patent application to serve as constructive reduction to practice of the subject matter of an interference count, the applicant must describe the subject matter of the count in terms that establish that he was in possession of the later-claimed invention, including all of the elements and limitations presented in the count, at the time of the earlier filing.

[9] Patents k99
291k99

Although known details need not be included in a patent specification, it must be shown, when an explicit limitation in an interference count is not present in the written description whose benefit is sought, that a person of ordinary skill would have understood, at the time the patent application was filed, that the description requires that limitation.

[10] Patents k99
291k99

It is insufficient as written description, for purposes of establishing priority of invention, to provide a specification that does not unambiguously describe all limitations of the count.

[11] Patents k106(1)
291k106(1)

Board of Patent Appeals and Interferences did not clearly err in finding that patentee's earlier-filed patent application did not adequately describe invention that was subject of interference count, for priority purposes, as subject matter missing from earlier application was not known details, but significant claim limitations, and missing subject matter was not shown to be part of the prior art that would be understood as part of the description of the subject matter of the count. 35 U.S.C.A. § 112.

[12] Patents k106(1)
291k106(1)

Requirement that specification of earlier-filed patent application "necessarily" describe entire subject matter of interference count, in order to claim priority based on earlier application, was equivalent to standard that applicant convey with reasonable clarity to those skilled in the art that, as of filing date sought, applicant was in possession of invention. 35 U.S.C.A. § 112.

[13] Patents k99
291k99

Written description of earlier-filed application must include all of the limitations of the interference count, to establish priority based on earlier application, or applicant must show that any absent text is necessarily comprehended in the description provided and would have been so understood at the time the patent application was filed. 35 U.S.C.A. § 112.

[14] Patents k98
291k98

[14] Patents k110
291k110

Alleged technical violations of rule governing continuation applications for patent did not warrant reversal of finding that chain of priority between application involved in interference count and original application was not broken, in view of Patent and Trademark Office's acceptance of allegedly deficient applications as in compliance with rule. 37 C.F.R. § 1.60 (1996).

[15] Administrative Law and Procedure k500
15Ak500

Regularity of routine administrative procedures is presumed, and departure therefrom, should such have occurred, is not grounds of collateral attack.

[16] Patents k115
291k115

Inventor of statutory invention registration (SIR) has same rights that a patent provides to prevent others from patenting the invention, and inventor preserves ability to protect the right to practice his own prior invention as against any later inventor, while foregoing the right to exclude others even if he is the prior inventor. 35 U.S.C.A. § 157.

[17] Patents k106(1)
291k106(1)

Board of Patent Appeals and Interferences was not required to rule on patentability of applicant's claims,

in interference proceeding, once applicant requested conversion to statutory invention registration (SIR), although Board was required to determine whether applicant or patentee had prevailed on issue of priority. 35 U.S.C.A. § 157.

[18] Patents k106(1)
291k106(1)

In patent interference proceeding, priority issues that have been fully developed and presented for decision should be decided. 35 U.S.C.A. § 135(a).

[19] Patents k106(1)
291k106(1)

Applicant's waiver of right to patent, in accordance with statutory invention registration (SIR), did not preclude Board of Patent Appeals and Interferences from recognizing applicant's status as prior inventor in interference proceeding. 35 U.S.C.A. § 157.

Patents k328(2)
291k328(2)

4,942,516. Cited.

***1350** John M. DiMatteo, Patterson, Belknap, Webb & Tyler LLP, of New York City, argued for appellant. With him on brief was Gregory L. Roth, Law Offices of Gregory L. Roth, of La Palma, California.

Louis Touton, Jones, Day, Reavis & Pogue, of Los Angeles, California, argued for cross-appellant. Of counsel on brief was Jay M. Cantor, Spencer, Frank & Schneider, of Washington, DC.

Before NEWMAN, MICHEL, and PLAGER, Circuit Judges.

PAULINE NEWMAN, Circuit Judge.

The parties to Patent Interference No. 102,598 are Gilbert P. Hyatt, inventor of United States Patent No. 4,942,516 entitled ***1351** "Single Chip Integrated Circuit Computer Architecture" (the '516 patent), and Gary W. Boone, inventor of patent application Serial No. 07/473,541 entitled "Variable Function Programmed Systems" (the '541 application). Mr. Hyatt appeals the decision of the Board of Patent Appeals and Interferences, entering judgment against him and cancelling the relevant claims of his '516 patent. Mr. Boone cross-appeals the Board's entry of judgment against him. We affirm the Board's decision, [FN1] with modification of the judgment to declare Boone the prevailing party in the interference.

FN1. *Hyatt v. Boone,* Patent Interference No. 102,598 (Bd. Pat.App. & Inter. Sept. 19, 1995) (Decision after Final Hearing); *Hyatt v. Boone,* Patent Interference No. 102,598 (Bd. Pat.App. & Inter. May 10, 1996) (Decision on Reconsideration).

DISCUSSION

Determination of priority of invention invokes a complex body of procedural and substantive law, applied in the first instance in administrative proceedings in accordance with 35 U.S.C. § 135(a) ("The Board of Patent Appeals and Interferences shall determine questions of priority of the inventions and may determine questions of patentability.") The interference proceeding implements the principle of United States law that the right to a patent derives from priority of invention, not priority of patent application filing.

[1][2] The general rule is that the first person to conceive the invention is the first inventor, *see* Irving Kayton, *The United States Patent as a Legal Instrument, in 1 Patent Practice* 2-1, 2-39 (Irving Kayton and Karyl S. Kayton eds., 4th ed. 1989) ("The earliest possible date of invention, therefore, is the date of conception."), provided that when the first to conceive the invention is the last to reduce it to practice, the person who was first to conceive must have exercised reasonable diligence to his own actual or constructive reduction to practice, "from a time prior to conception by the other." 35 U.S.C. § 102(g). *See* Charles L. Gholz, *Interference Practice, in 6 Patent Practice, supra,* 24-1, 24-6(c); *Paulik v. Rizkalla,* 760 F.2d 1270, 1272, 226 USPQ 224, 225 (Fed.Cir.1985) (in banc). Thus, during an interference proceeding evidence may be presented of conception, reduction to practice, and diligence, as appropriate to the positions of the parties, *see id.; see generally* Gholz, *supra,* at 24-1, or a party may rely on the patent document to establish the facts of priority of invention. *See* Gholz, *supra,* at 24-45.

The contested invention is a computer formed on a single integrated circuit chip, having specified circuits and functions. The sole count of the interference is:

A computer on a chip comprising:
an integrated circuit chip having a computer implemented thereon;
an integrated circuit main memory storing computer instructions, wherein said integrated circuit main memory is included on said integrated

circuit chip;
an integrated circuit operand memory storing operands, wherein said integrated circuit operand memory is included on said integrated circuit chip; and
an integrated circuit processing circuit processing the operands stored by said integrated circuit operand memory in response to the instructions stored in said integrated circuit main memory, wherein said processing circuit is included on said integrated circuit chip.

The interference contest was initiated by Boone after Hyatt's '516 patent issued. Boone followed the procedure of copying certain of Hyatt's patent claims into his pending application and asking the patent examiner to "declare" the interference. 37 C.F.R. § 1.607 (1990). The examiner so acted. *See* 37 C.F.R. § 1.611 (1990).

Both parties claimed the benefit of earlier-filed patent applications, relying on the earlier applications for constructive reduction to practice of the subject matter of the count. *See* 37 C.F.R § 1.626 (1990). Conception is not at issue in this appeal, and neither party presented evidence of actual reduction to practice. At the Motions stage from which the Board's decision evolved, the only issue was each party's entitlement to certain asserted dates of constructive reduction to practice.

Boone was granted an effective filing date, through a chain of nine prior applications, of ***1352** an application filed on July 19, 1971. Hyatt was granted an effective filing date, through a chain of four prior applications, of an application filed on December 14, 1977. The Board denied Hyatt the benefit of the filing date of his December 28, 1970 application No. 05/101,881 (the '881 application) as to the subject matter of the count. Hyatt disputes the denial of the '881 application filing date, and also challenges the date awarded to Boone.

I
HYATT'S '881 APPLICATION

[3][4] The filing of a patent application serves as conception and constructive reduction to practice of the subject matter described in the application. *Yasuko Kawai v. Metlesics,* 480 F.2d 880, 885, 178 USPQ 158, 162 (CCPA 1973) ("[T]he act of filing the United States application has the legal effect of being, constructively at least, a simultaneous conception and reduction to practice of the invention."); *see Hybritech Inc. v. Monoclonal Antibodies, Inc.,* 802 F.2d 1367, 1376, 231 USPQ 81, 87 (Fed.Cir.1986) ("constructive reduction to practice occurs when a patent application on the claimed invention is filed"); *In re Glass,* 492 F.2d 1228, 1232, 181 USPQ 31, 34 (CCPA 1974). There is no need for proof or corroboration of the subject matter that is included in the application unless a date earlier than the filing date is sought to be established. *Yasuko Kawai,* 480 F.2d at 886, 178 USPQ at 163 ("the written specification in the application is the evidence proving the invention of that which is reduced to practice"). Thus the inventor need not provide evidence of either conception or actual reduction to practice when relying on the content of the patent application.

[5] However, the patent application must comply with the legal requirements for support of the interference count. When a party to an interference seeks the benefit of an earlier-filed United States patent application, the earlier application must meet the requirements of 35 U.S.C. § 120 [FN2] and 35 U.S.C. § 112 ¶ 1 [FN3] for the subject matter of the count. The earlier application must contain a written description of the subject matter of the interference count, and must meet the enablement requirement. *Fiers v. Revel,* 984 F.2d 1164, 1170, 25 USPQ2d 1601, 1606 (Fed.Cir.1993) (section 112 paragraph 1 must be met by the earlier application). The Board found that Hyatt's '881 application did not provide the requisite written description; the Board did not decide the question of enablement.

FN2. 35 U.S.C. § 120. Benefit of earlier filing date in the United States.
An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States ... shall have the same effect, as to such invention, as though filed on the date of the prior application....

FN3. 35 U.S.C. § 112 ¶ 1.
[The application must contain] a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same....

[6] We review the Board's findings on the standard of clear error, for compliance with the written description requirement is a question of fact. *Vas-Cath Inc. v. Mahurkar,* 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed.Cir.1991). Hyatt relies as written description on the text of claim 40 as that claim was originally filed in the '881 application, viewed with the entire specification.

[7] The claims as filed are part of the specification, and may provide or contribute to compliance with § 112. *See Northern Telecom, Inc. v. Datapoint Corp.,* 908 F.2d 931, 938, 15 USPQ2d 1321, 1326 (Fed.Cir.1990) (the original claims are part of the patent specification); *In re Benno,* 768 F.2d 1340, 1346, 226 USPQ 683, 686-87 (Fed.Cir.1985); *In re Frey,* 35 C.C.P.A. 970, 166 F.2d 572, 575, 77 USPQ 116, 119 (CCPA 1948). Hyatt's original claim 40 is for a data processing system implemented on a single integrated circuit chip, as follows:

> 40. An electronic data processing system including read only memory means, alterable memory means and program means, said system being implemented on a single integrated circuit chip.

***1353** There is no other mention in the '881 specification of a single integrated circuit chip, although other electronic data systems are extensively described.

Hyatt's position is that the text of claim 40 describes the subject matter of the interference count, in that the "read only memory means" of claim 40 is the same as the "integrated circuit main memory storing computer instructions" of the count, the "alterable memory means" of claim 40 is the same as the "integrated circuit operand memory storing operands" of the count, and the "program means" of claim 40 is the same as the "integrated circuit processing circuit" of the count. Hyatt states that the '881 specification contains detailed descriptions of various computer circuits, which supplement the text of claim 40 in that the specification describes a computer made up of numerous integrated circuits mounted on multiple printed circuit boards and comprising a "physically distributed, operatively dispersed system."

The Board held that the written description must be sufficient, when the entire specification is considered, that the "necessary and only reasonable construction" that would be given it by a person skilled in the art is one that clearly supports each positive limitation in the count. The Board found that the term "program means" in claim 40 is used to describe only computer instructions or as a modifier of "program control means," and does not describe or require the interpretation that the program processes the operands stored by the alterable memory in accordance with instructions stored in the read only memory, as is required by the count. The Board also found that the "read only memory means" of claim 40 need not be a main memory storing computer instructions, and that the "alterable memory means" of claim 40 need not be an operand memory storing operands. Thus the Board found that original claim 40 could be read as describing subject matter other than that of the count, and thus did not establish that Hyatt was in possession of the invention of the count. The Board found that the parts of the written description that are lacking from claim 40 are not provided elsewhere in the '881 specification, whose systems and circuitry neither describe nor suggest a computer on a single chip. The Board concluded that "[w]hile two memories and a computer program may generally constitute a data processing system of some sort, they do not describe the invention set forth by the count."

Rejecting Hyatt's argument, supported by testimony of witnesses, that the absent description would have been apparent to persons of skill in this field, the Board stated that "if 'program means' can be a circuit (processor) that responds to a program as indicated by [Hyatt's] witnesses, it is at least as likely that it can be a memory that merely stores a program without processing operands." The Board held that witnesses can not "establish facts which the disclosure itself should provide," citing *In re Smyth,* 38 C.C.P.A. 1130, 189 F.2d 982, 990, 90 USPQ 106, 112 (CCPA 1951). Hyatt challenges these findings and conclusions, as well as the Board's legal standard for determining compliance with the written description requirement.

B

[8][9][10] For an earlier-filed application to serve as constructive reduction to practice of the subject matter of an interference count, the applicant must describe the subject matter of the count in terms that establish that he was in possession of the later-claimed invention, including all of the elements and limitations presented in the count, at the time of the earlier filing. Although Hyatt is correct that known details need not be included in a patent specification, *see In re Eltgroth,* 57 C.C.P.A. 833, 419 F.2d 918, 921, 164 USPQ 221, 223 (CCPA 1970) ("This court has often observed that minutiae of descriptions or procedures perfectly obvious to one of ordinary skill in the art yet unfamiliar to laymen

need not be set forth."), when an explicit limitation in an interference count is not present in the written description whose benefit is sought it must be shown that a person of ordinary skill would have understood, at the time the patent application was filed, that the description requires that limitation. As discussed in *Martin v. Mayer,* 823 F.2d 500, 505, 3 USPQ2d 1333, 1337 (Fed.Cir.1987), "It is 'not a question of whether one skilled in the art *might* be able ***1354** to construct the patentee's device from the teachings of the disclosure.... Rather, it is a question whether the application necessarily discloses that particular device.' " (quoting *Jepson v. Coleman,* 50 C.C.P.A. 1051, 314 F.2d 533, 536, 136 USPQ 647, 649-50 (CCPA 1963)). *See Lockwood v. American Airlines, Inc.,* 107 F.3d 1565, 1571-72, 41 USPQ2d 1961, 1966 (Fed.Cir.1997). It is insufficient as written description, for purposes of establishing priority of invention, to provide a specification that does not unambiguously describe all limitations of the count. *See, e.g., Wagoner v. Barger,* 463 F.2d 1377, 1380, 175 USPQ 85, 86-87 (CCPA 1972); *Dyer v. Field,* 55 C.C.P.A. 771, 386 F.2d 466, 156 USPQ 85 (CCPA 1967); *Bocciarelli v. Huffman,* 43 C.C.P.A. 873, 232 F.2d 647, 109 USPQ 385 (CCPA 1956).

[11] Hyatt and Boone presented conflicting views of the knowledge of a person of ordinary skill in the field of the invention at the time the '881 patent application was filed, and disputed whether such a person would have understood the text of Hyatt's original claim 40 as describing all of the limitations of the count. Hyatt's witnesses testified that a person of skill in this field would have known that the program means processes the operands in accordance with the read-only memory instructions, and would have readily understood that the program means, read only memory means, and alterable memory means cooperate in the way stated in the count. The Board criticized this testimony on the ground that although Hyatt's witnesses stated that it was well known that a data processing system must include a processing circuit of some sort, they did not address "whether a data processing system must necessarily include the specific processing circuit required by the count." We have not been shown clear error in the Board's findings as to the content of the written description, and the conclusion that the missing subject matter was not known details, but significant claim limitations; the missing subject matter was not shown to be part of the prior art that would be understood as part of the description of the subject matter of the count.

[12] Hyatt states that even if the Board's findings are not clearly erroneous as to the content of the written description, the Board applied an incorrect legal standard in requiring that the specification "necessarily" describe the entire subject matter of the count. Hyatt states that a separate body of precedent, typified by *Vas-Cath Inc. v. Mahurkar,* 935 F.2d 1555, 19 USPQ2d 1111 (Fed.Cir.1991), states a different and better standard. In *Vas-Cath* the court stated that the applicant must "convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention." *Id.* at 1563-64, 935 F.2d 1555, 19 USPQ2d at 1117. Other cases have used the same words in assessing the adequacy of the written description. *See, e.g., Fujikawa v. Wattanasin,* 93 F.3d 1559, 1570, 39 USPQ2d 1895, 1904 (Fed.Cir.1996) ("the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question"); *Fiers v. Revel,* 984 F.2d at 1170, 25 USPQ2d at 1606 (same); *In re Kaslow,* 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed.Cir.1983) (same). Hyatt states that he readily met this requirement, in that original claim 40 of his '881 application reasonably conveyed to persons of skill in this field that he possessed the invention of the count.

[13] Hyatt argues that "reasonably conveys to the artisan" is a less rigorous and more reasonable measure of the written description requirement than the "necessary and only reasonable construction" standard that the Board applied. Precedent has used both phrases, as well as others. *See, e.g., In re Wertheim,* 646 F.2d 527, 538-39, 209 USPQ 554, 565 (CCPA 1981) (the disclosure relied on must "constitute[] a full, clear, concise and exact description ... of the invention claimed"). We do not view these various expressions as setting divergent standards for compliance with § 112. In all cases, the purpose of the description requirement is "to ensure that the inventor had possession, as of the filing date of the application relied on, of the specific subject matter later claimed by him." *In re Edwards,* 568 F.2d 1349, 1351-52, 196 USPQ 465, 467 (CCPA 1978). Thus, the written description must include all of the limitations of the interference count, or the applicant must show that any absent text is necessarily comprehended in the description provided and ***1355** would have been so understood at the time the patent application was filed.

The Board did not clearly err in finding that Hyatt did not establish in the '881 application's written description that he possessed the entire subject matter of the count. This finding comports with the

criterion not only of whether the description conveyed to the artisan the specific subject matter of the count, but also of whether the applicant established that this was the necessary construction of that description. The written description must include the limitations of the count with sufficient clarity and specificity that "persons of ordinary skill in the art will recognize from the disclosure that appellants invented processes including those limitations," *In re Wertheim,* 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). The denial to Hyatt of benefit of the '881 application date as constructive reduction to practice of the interference count is affirmed.

II
BOONE'S '565 APPLICATION

[14] Hyatt objected to the action of the administrative patent judge in according Boone the benefit of the July 19, 1971 filing date of application Serial No. 163,565 (the '565 application), the first of ten applications culminating in the '541 application in interference. Hyatt's objection is that at least two of these ten applications are invalid continuation applications, thus breaking the chain of priority. Hyatt states that Boone's second and eighth applications, both of which were filed under the "streamlined" procedures of 37 C.F.R. § 1.60 (Rule 60) with photocopies of the prior specification and oath, contained amended claims and thus could not have been filed under Rule 60, but required a new oath. Boone concedes the facts of these filings, but argues that these are not flaws, or not flaws fatal to his entitlement to trace priority through the chain.

[15] Rule 60, at the time of Boone's first challenged continuation application in 1973, was as follows:

> 37 C.F.R. § 1.60 [1973]. A continuation or divisional application ... which discloses and claims only subject matter disclosed in a prior application may be filed as a separate application before the patenting or abandonment of or termination of proceedings on the prior application. If the application papers comprise a copy of the prior application as filed, signing and execution by the applicant may be omitted.... Only amendments reducing the number of claims or adding a reference to the prior application (§ 1.78(a)) will be entered before calculating the filing fee and granting of the filing date.

By 1987, when Boone's eighth continuation was filed, Rule 60 had been elaborated as follows:

> 37 C.F.R. § 1.60(b) [1987]. An applicant may omit signing of the oath or declaration in a continuation or divisional application if ... (2) applicant files a true copy of the prior complete application as filed including the specification (including claims), drawings, oath or declaration showing the signature or an indication it was signed, and any amendments referred to in the oath or declaration filed to complete the prior application.... Only amendments reducing the number of claims or adding a reference to the prior application (§ 1.78(a)) will be entered before calculating the filing fee and granting of the filing date.

From the text of these provisions, it is not clear whether any technical violation of Rule 60 actually occurred with the presentation of amended claims. The administrative patent judge found none. No objection to compliance with Rule 60 was raised by the PTO at the time these applications were filed and prosecuted. The issue here raised is not one of substantive continuity of disclosure, but solely of whether a photocopy of the prior oath, instead of a new oath, was acceptable for filing, when it was in fact accepted for filing. Any technical deficiency in meeting the formal requirements of Rule 60 must be viewed in light of the agency's acceptance of the applications as in compliance with the Rule. Regularity of routine administrative procedures is presumed, and departure therefrom, should such have occurred, is not grounds of collateral attack. Courts should not readily intervene in the day-to-day operations of an administrative agency, especially when the agency practice is in straightforward ***1356** implementation of the statute. *Cf. Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 98 S.Ct. 1197, 55 L.Ed.2d 460 (1978) ("[T]his Court has for more than four decades emphasized that the formulation of procedures was basically to be left within the discretion of the agencies to which Congress had confided the responsibility for substantive judgments."); *Federal Power Comm'n v. Transcontinental Gas Pipe Line Corp.,* 423 U.S. 326, 333-34, 96 S.Ct. 579, 46 L.Ed.2d 533 (1976) (" 'The Court, it is true, has power 'to affirm, modify, or set aside' the order of the Commission 'in whole or in part.' ... But that authority is not power to exercise an essentially administrative function.' ") (quoting *Federal Power Comm'n v. Idaho Power Co.,* 344 U.S. 17, 21, 73 S.Ct. 85, 97 L.Ed. 15 (1952)). We also take note, as held in *Weil v. Fritz,* 572 F.2d 856, 863, 196 USPQ 600, 606 (CCPA 1978), that the "applicant's oath is not a requirement of § 112, first paragraph, but of 35 U.S.C. § 115; therefore, the sufficiency of [the prior] oath is not material under §

120."

We discern no reversible error in the grant to Boone of the benefit of his chain of filings.

III
BOONE'S CROSS-APPEAL

The Board declined to enter judgment in favor of Boone, and entered judgment against Boone based on his request that his application be converted into a Statutory Invention Registration (SIR). Boone appeals the Board's refusal to rule on the patentability of his claims, which had been rejected on the ground of double patenting, and states that the Board erred in its refusal to enter judgment that the issue of priority was decided in his favor.

[16] At the hearing before the Board Boone renewed his request that the '541 application be converted into a Statutory Invention Registration in accordance with 35 U.S.C. § 157. The SIR permits an inventor to forego the grant of a patent while preserving the opportunity to contest priority through interference proceedings. The statute provides:

> 35 U.S.C. § 157. Statutory invention registration
>
> (a) Notwithstanding any other provision of this title, the Commissioner is authorized to publish a statutory invention registration containing the specification and drawings of a regularly filed application for a patent without examination if the applicant--
>
> (1) meets the requirements of section 112 of this title;
>
> (2) has complied with the requirements for printing, as set forth in regulations of the Commissioner;
>
> (3) waives the right to receive a patent on the invention within such period as may be prescribed by the Commissioner; and
>
> (4) pays application, publication, and other processing fees established by the Commissioner.
>
> * * * * * *
>
> (c) A statutory invention registration published pursuant to this section shall have all of the attributes specified for patents in this title except those specified in section 183 and sections 271 through 289 of this title. A statutory invention registration shall not have any of the attributes specified for patents in any other provision of law other than this title.... The invention with respect to which a statutory invention certificate is published is not a patented invention for purposes of section 292 of this title.

The inventor of the SIR has "the same rights that a patent provides to prevent others from patenting the invention." *Section-by-Section Analysis: Patent Law Amendments of 1984,* 130 Cong. Rec. H10525 (Oct. 1, 1984), *reprinted in* 1984 U.S.C.C.A.N. 5827, 5828. The inventor preserves the ability to protect the right to practice his own prior invention as against any later inventor, while foregoing the right to exclude others even if he is the prior inventor. Thus the SIR affords an inventor the possibility of securing the defensive aspects of a patent by obtaining the right to contest priority, while agreeing to publish the technology, thereby benefitting the public. *Id.*

[17] Boone moved for permission to convert his '541 application to a SIR, after Boone had initiated this interference with ***1357** Hyatt and Boone's ' 541 application was rejected, on Hyatt's motion, on the ground of double patenting. Boone argues that the conversion of the '541 application to the SIR removed the only obstacle to patentability raised by the double patenting rejection, *i.e.* that of extension of effective patent life, because the SIR-- since it is not an enforceable patent--would not effectively extend the patentee's right to exclude. Boone argues that he is entitled to a decision as to patentability although he will not obtain a patent.

The Board did not err in declining to rule on this issue in view of Boone's requested conversion to a SIR. Although Boone states that he is free to withdraw the SIR application at any time until the PTO has given notice of the intent to publish it, the intervening event of the interference proceeding has eliminated this option. Although administrative flexibility to accommodate changed circumstances or interests is a benefit of agency practice, there is rarely room for a complete change in position after the contrary position had achieved its purpose in a contested situation. We draw analogy to the rules of integrity in judicial proceedings. *See, e.g., Davis v. Wakelee,* 156 U.S. 680, 689, 15 S.Ct. 555, 39 L.Ed. 578 (1895) ("[W]here a party assumes a certain position in a legal proceeding, and succeeds in maintaining that position, he may not thereafter, simply because his interests have changed, assume a contrary position, especially if it be to the prejudice of the party who has acquiesced in the position formerly taken by him."); *cf. U.S. Philips Corp. v. Sears, Roebuck & Co.,* 55 F.3d 592, 596-97, 34 USPQ2d 1699, 1702-03 (Fed.Cir.1995) (equity holds a party to a position on which it prevailed).

The Board has instructed that Boone's application be examined for the purpose of publication as a SIR.

Indeed, Boone has repeated on this appeal that he has no objection to this procedure. In view of Boone's action in requesting conversion to a SIR and the ensuing proceedings, the Board did not err in holding that Boone is not entitled to a patent on the '541 application. However, the patent interference statute requires the Board to determine which party has prevailed on the issue of priority. 35 U.S.C. § 135(a) ("The Board of Patent Appeals and Interferences shall determine questions of priority....").

[18][19] Priority issues that have been fully developed and presented for decision should be decided. *See Guinn v. Kopf,* 96 F.3d 1419, 1422, 40 USPQ2d 1157, 1159 (Fed.Cir.1996). Indeed, the Board did decide priority, for the Board held that Hyatt was not entitled to the benefit of his '881 application date, and confirmed that Boone was entitled to his '565 application date. The Board's reason for refusing to recognize Boone's status as prior inventor was that Boone "was not entitled to a patent by express waiver of that right," citing 35 U.S.C. § 157(a)(3). However, the SIR waiver does not affect the adjudication of priority in resolution of the interference proceeding. The Board's statement, in its reconsideration decision, that it could not adjudge Boone to be prior inventor without also holding that Boone was entitled to a patent, citing 37 C.F.R. § 1.658(a), is an unwarranted reading of the regulation and is unsupported by the statute. Although the Board correctly ruled that Boone was not entitled to a patent, that ruling is not inconsistent with an adjudication of priority. Thus the judgment is modified to state that priority as to the count is awarded to Boone.

SUMMARY

The Board's decision that Hyatt is not entitled to the priority date of the '881 application as to the subject matter of the count is affirmed, as is the Board's decision that Boone is not entitled to a patent on this subject matter. However, judgment of priority in the interference contest shall be entered in favor of Boone.

No costs.

AFFIRMED, MODIFIED IN PART.

146 F.3d 1348, 47 U.S.P.Q.2d 1128

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220 U.S.P.Q. 47
1983 WL 51865 (Pat.& Tr. Office Bd.App.)
(Cite as: 220 U.S.P.Q. 47)

Kondo, Takashima, and Tunemoto
v.
Martel, Tessier, Demoute, and Jolly

Patent and Trademark Office Board of Patent Interferences

Opinion dated May 2, 1983

United States Patents Quarterly Headnotes

PATENTS
[1] Interference -- Burden of proof -- In general (§ 41.051)
Junior party whose application was copending with that of senior party has burden of proving prior invention by preponderance of evidence.

PATENTS
[2] Interference -- Issues determined (§ 41.45)
Interference -- Practice (§ 41.60)
35 USC 135(b) requires applicant to claim same or substantially same subject matter as claim of issued patent within one year of its issue date; issue of whether party complied with Section 135(b) requirements is ancillary to priority.

PATENTS
[3] Interference -- Practice (§ 41.60)
35 USC 135(b) is drawn to claimed subject matter.

PATENTS
[4] Interference -- Dissolution -- In general (§ 41.301)
Board of Patent Interferences has no power to dissolve interference; at most board has power to recommend to Commissioner under Patent Rule 259 that interference be dissolved.

PATENTS
[5] Interference -- Counts (§ 41.20)
Substituting broader count when party's best proofs lie outside scope of present counts is accepted interference practice; fact that one claim of party's application corresponds to three separate counts is not improper.

PATENTS
[6] Interference -- Conception of invention (§ 41.10)
Utility is necessary ingredient of conception.

PATENTS
[7] Interference -- Conception of invention (§ 41.10)
Introduction of disclosure into U.S., containing enabling disclosure of specie within count, communicated and understood by someone in U.S. was conception of invention; conception of species within genus is sufficient to establish conception of generic invention.

PATENTS
[8] Interference -- Reduction to practice -- In general (§ 41.751)
Reduction to practice of single species within count's scope constitutes reduction to practice of invention defined by count for purposes of priority in interference proceeding.

PATENTS
[9] Interference -- Evidence -- Reduction to practice (§ 41.361)
Interference -- Reduction to practice -- Tests (§ 41.758)
Boiling point, in absence of further test date, is inadequate to identify new compound.

PATENTS
[10] Interference -- Diligence -- Period of diligence (§ 41.257)
Diligence must be shown from immediately prior to opponent's effective filing date through actual reduction to practice.

PATENTS
[11] Interference -- Diligence -- In general (§ 41.251)
Activities abroad that are unaccompanied by any activities in U.S. cannot be used in establishing diligence; mere passive reading of reports in this country is not diligence; to constitute diligence, there must be activity in this country resulting from inventor's work; attorney's acts leading to preparation of patent application accrue to inventor's benefit for purpose of showing diligence.

PATENTS
Particular patents -- Lactones
4,166,063, Martel, Tessier, Demoute, and Jolly, Bicyclic Lactones and Process Thereto, awarded priority against Kondo, Takashima, and Tunemoto,

application.

*48 Patent interference No. 100,486 between Kiyoshi Kondo, Toshiyuki Takashima, and Daiei Tunemoto, application, Serial No. 000,736, filed Jan. 3, 1979, accorded benefit of application, Serial No. 875,649, filed Feb. 6, 1978, and Jacques Martel, Jean Tessier, Jean-Pierre Demoute, and Jean Jolly, Patent No. 4,166,063, issued Aug. 28, 1979, on application, Serial No. 914,399, filed June 12, 1978, accorded benefit of French application, Serial No. 77-19612, filed June 27, 1977. Priority awarded to party Martel.

Richard L. Hansen, West Chester, Pa., Henry Robinson Ertelt and Pauline Newman, both of Philadelphia, Pa., and John L. White, Arlington, Va., for party Kondo.

Nelson Littell, Nelson Littell, Jr., Walter G. Weissenberger, and Charles A. Muserlian, all of New York, N.Y., and Charles W. Vanecek, Tampa, Fla., for party Martel.

Calvert and Weinberger, Examiners of Interferences, and Lieberman, Acting Examiner of Interferences.

Lieberman, Acting Examiner of Interferences.

This interference involves a lactone which is a 4-trihalomethyl-6, 6- dimethyl-2-oxo-3-oxabicyclo [3.1.0] hexane. The lactone is an intermediate which undergoes a ring opening reaction to form a cis-3-(2,2-dihalomethyl-vinyl)-cyclopropanecarboxylic acid. This acid may be subsequently esterified with specified alcohols to a pyrethroid insecticide. The issue is defined by the counts which read as follows:

Count 1

A lactone of a 2,2-dimethyl-cyclopropane-1-carboxylic acid of the formula

Image 1 (1.75□ X 2.25□) Available for Offline Print

wherein Xsub1 , Xsub2 and Xsub3 when identical are selected from the group consisting of chlorine and bromine and when at least two are different, are selected from the group consisting of fluorine, chlorine and bromine.

Count 2

A compound of Count 1 wherein Xsub1 , Xsub2 and Xsub3 each are chlorine.

Count 3

A compound of Count 1 wherein Xsub1 , Xsub2 and Xsub3 each are chlorine or each are bromine.

Count 4

A compound of Count 1 wherein Xsub1 , Xsub2 and Xsub3 each are chlorine or two thereof are chlorine and one is fluorine.

The relation of the counts of the interference to the claims of the respective parties is as follows:

Count	Martel et al.	Kondo et al.
1	1	38(s)
2	2(m)	41
3	3(p)	41(p)
4	4(p)	41(p)

The Martel et al. (hereinafter, Martel) patent is assigned to Roussel Uc La F, Paris, France, a corporation of France. The Kondo et al. (hereinafter, Kondo) application is assigned to FMC Corporation.

In accordance with a stipulation under 37 CFR 1.272(c), Kondo submitted an evidentiary record in the form of stipulated facts, testimony [FN1] and exhibits. Martel submitted no evidence and is therefore restricted to the French priority date of June 27, 1977. Both parties filed briefs under 37 CFR 1.254 and appeared through counsel at oral hearing.

No question of interference in fact has been raised

by the parties.

*49 There are two issues presented for decision.

1. Whether the Primary Examiner erred in granting the motion by the party Kondo to amend the interference by the addition of the above Counts 2, 3 and 4.

2. Whether the evidentiary record of Kondo establishes that the invention was conceived in the United States prior to June 27, 1977, with diligence from immediately prior to the above date until its reduction to practice on or about August 6, 1977 by the introduction of a sample into the United States from Japan; or until its reduction to practice on or after October 12, 1977; or until its effective filing date of February 6, 1978.

[1] Kondo, as the junior party to this interference whose application was co-pending with that of the senior party Martel has the burden of proving prior invention by a preponderance of the evidence. Peeler v. Miller, 535 F.2d 647, 190 USPQ 117 (CCPA 1976).

The Propriety of Granting the Motion to Amend

Martel urges this Board to reverse the Examiner's granting of the Kondo motion to amend the interference by the addition of counts 2 to 4. Two separate issues are encompassed in Martel's argument.

[2] As to count 4, it is submitted by Martel that Kondo should be barred from claiming the subject matter under 35 USC 135(b), which requires an applicant to be claiming the same or substantially the same as a claim of an issued patent within one year of its issue date. The asserted basis for this bar is that Kondo never claimed the dichlorofluoro species of Count 4 in the one-year critical period. Since the issue presented by Martel is ancillary to priority, if Kondo did not comply with the requirements of the statute, 35 USC 135(b), priority of invention as to count 4 would have to be awarded to Martel. See Jenks v. Knight, 90 F.2d 654, 33 USPQ 601 (CCPA 1937).

[3] We find however that the Examiner acted properly. Martel in error equate counts and claims. The statute, 35 USC 135(b), is drawn to claimed subject matter. It is not relevant to the counts of an interference in the sense used by Martel as the counts are not necessarily the same as the corresponding claims. Here, Kondo's claim which corresponds to count 4 recites only the trichloro species, and Kondo had presented claims including that species well prior to the end of the one-year period (see, e.g., claims 9 and 38).

As to Counts 2 to 4 Martel argue that "no need is seen" for the phantom counts as proposed by Kondo or for allowing Kondo to contest the priority of three species based on one species alone. Martel further argue that 37 CFR 1.205 does not provide for broadening the claims of a patent to include subject matter not recited therein.

[4] It is difficult to ascertain the nature of the relief sought by Martel. If they are requesting that the Board dissolve the interference, this Board has no such power. At most, this Board has the power to recommend to the Commissioner under 37 CFR 1.259 that this interference be dissolved. We will accordingly treat the issue raised as a request to recommend the dissolution of the interference.

[5] The request is denied. It is accepted interference practice to substitute a broader count when a party's best proofs lie outside the scope of the present counts. By the addition of the trichloro species to Count 3 and 4, Kondo have in effect broadened the count to include an additional and non- patentably distinct species wherein he can provide the best proofs of priority. Nelson v. Drabek, 212 USPQ 98 (Comr. 1979); Wheelock v. Wolinski, 175 USPQ 216 (Comr. 1963). The claims of the patent remain unaffected. Only the counts have been broadened. The fact that one claim of Kondo's application corresponds to three separate counts is not improper. Brader v. Schaeffer, 194 USPQ 283 (Comr. 1975) and 193 USPQ 627 (Bd.Pat.Int. 1976).

Kondo's Case for Priority

Kondo state that the conception of the invention of the counts occurred in Japan and was introduced into the United States prior to June 27, 1977, the effective filing date of the senior party. Kondo further assert that they were diligent from a date prior to the effective filing date of Martel until reduction to practice in the United States on one of three dates. They assert that the first date to which they are entitled for an actual reduction to practice is August 6, 1977, the date on which a sample of the lactone of the count was introduced into the United States. If for any reason no reduction to practice is established on that date, they assert an actual reduction to

practice in the United States on or shortly after October 12, 1977, the date the lactone was prepared in this country. Finally, Kondo assert that if no reduction to practice can be established on either of the above two dates, their filing date of February 6, 1978 provides a date for constructive reduction to practice of the invention.

*50 A. Conception

Dr. Guiducci, Ph.D. in organic chemistry, testified at TG 2 and TG 8, [FN2] that FMC had contracted for laboratory research in the field of manufacturing processes for pyrethroid insecticides, and that cis-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylic acid was a known pyrethroid insecticide intermediate.

The evidence shows that Kondo were engaged to perform research in Japan beginning in October 1976 on the stereospecific synthesis of dichlorovinyl cyclopropane carboxylic acid derivatives. The research performed was reported monthly to FMC Corporation. The monthly report consisted of three parts: a SUMMARY REPORT, a MONTHLY REPORT, and a laboratory notebook containing the actual record of the research performed during that month, Ex. A, B and C. [FN3]

On December 13, 1976, FMC received a monthly report (Ex. E) detailing a synthetic route for preparation of the specific lactone of count 2 and the ring opening of the lactone to form "cis-Dichlorovinylcylopropanecarboxylic acid (Cis-C acid)." Dr. Guiducci further testified at TG 2-5 that the reports were received, read and understood by him.

[6] In order for Kondo to establish conception it must appear that there was conception of a utility for the lactone of Count 2, utility being a necessary ingredient of conception. Meitzner v. Corte, 56 CCPA 1099, 410 F.2d 433, 161 USPQ 599 (1969); Rebstock v. Flouret, 191 USPQ 342 (Bd.Pat.Int.1975).

Martel argue that no utility for the lactone of the count had been demonstrated, in that no insecticidally active ester had been produced by ring opening the lactone followed by esterification of the resulting cis acid, prior to Kondo's filing for a patent in the United States. At most the lactone ring had been opened to form the cis acid.

We find no merit in Martel's position. Martel admit in their U.S. patent 4,166,063, that, "French Pat. No. 2,185,612 describes a process from [sic: for] the production of cis-2,2-dimethyl-cyclopropane-1-carboxylic acids of formula IV," column 1, lines 6-9. The acids of formula IV discussed therein include the acids formed by opening the lactone ring of count 2. Martel, relying upon the French patent disclosure, state in column 4, lines 25-33 of their U.S. patent that the acids of formula IV can be directly esterified with an alcohol, which esters are known to have extremely high insecticidal activity.

French Patent No. 2,185,612 has a publication date of 4-1-74, substantially prior to the entry of either party into the field. Accordingly, the utility of the acid (and therefore of the lactone) was known in the art at the time of Kondo's alleged conception. It therefore follows that the conception by Kondo of a process for the preparation of cyclopropane carboxylic acid from the lactone of Count 2 was conception of a compound having a known utility, since it was known that the acid was esterifiable to an insecticidally active ester.

[7] Accordingly, we find that the introduction of the Kondo disclosure into the United States containing an enabling disclosure of a species within the counts, communicated and understood by someone in this country, amounted to conception of the invention. [FN4] Clevenger v. Kooi, 190 USPQ 188 (Bd.Pat.Int.1974).

B. Reduction to Practice

[8] It is well settled that the reduction to practice of a single species within the scope of a count constitutes a reduction to practice of the invention defined by the count for the purposes of priority in an interference proceeding. Mikus v. Wachtel, 504 F.2d 1150, 183 USPQ 752 (CCPA 1974). Accordingly, it is sufficient for Kondo to prevail in this contest that they prove priority of invention with respect to the trichloro species of the counts. No proof need be presented with respect to either the tribromo species of Count 3 or the dichlorofluoro species of Count 4.

It is however necessary to determine the date of actual or constructive reduction to practice by Kondo of the trichloro species. Three dates are suggested in their brief:

1. The date on which a sample of the lactone of the count arrived in the United States, August 6, 1977;

2. The date on which the lactone of the count was

prepared in this country, about October 12, 1977;

3. The date on which Kondo filed their application, February 6, 1978.

As to the date of August 6, 1977, Ex. AX shows that a product labeled as being the ***51** lactone in question was mailed to the United States on August 2, 1977. Guiducci testified, TG 20, that he received the samples mentioned in Ex. AX "on or shortly after August 6, 1977." Takashima, a coinventor, testified that batches of the lactone were prepared in Japan as described in pages 102, 106, 108, 119 and 121 of Ex. AG, (TT 39-40), and an NMR spectrum was allegedly prepared for each batch. Takashima stated that the batches of the lactone were combined, purified and the composite sent to the United States. The composite was not tested in this country to determine whether it was what it was purported to be.

The record of Kondo stands in contrast to the one in Breuer v. DeMarinis, 558 F.2d 22, 194 USPQ 308 (CCPA 1977). The issue of identification in both cases is the same, viz., did the foreign inventor prove that the compound introduced in the United States was the compound of the counts despite the absence of a domestic chemical analysis?

> [9] In the instant case we find that Kondo have not proved that the compound received on August 6, 1977 was a compound within the counts. In contrast to the Breuer case, the compound was not accompanied by an infrared spectrum or any other spectra, but only by a structural formula and boiling point. The NMR spectra allegedly prepared in Japan were not sent to the United States. We do not regard a boiling point, in the absence of further test data, as adequate to identify a new compound. Unlike the infrared spectrum in the Breuer case, it is not "a distinctive fingerprint for chemical compounds."

It follows that on the record before us there was no proper identification of the sample received in this country. Hence there was no reduction to practice on or about August 6, 1977.

We do find a reduction to practice in the United States on October 27, 1977. We rely upon both the work done on behalf of the inventors in this country involving preparation of the lactone and the cis acid in October, 1977.

With respect to the work done in this country, Ex. DF demonstrates the preparation of the lactone of the count in crude form on October 12, 13 and 14, 1977. An NMR spectrum is attached. The lactone was again prepared on October 17, 18, 20, 24 and 25, Ex. DH. An NMR spectrum taken October 18 is attached. EX. DK shows preparation of the dichlorovinylcyclopropanecarboxylic acid from the lactone of the counts on October 27. An NMR spectrum is attached.

We hold the above mentioned NMR spectrum in conjunction with the process utilized, sufficient to establish that both the lactone of the counts and the acid derived therefrom were prepared. Moreover, the preparation of the aforesaid acid by ring opening of the lactone is sufficient to establish a reduction to practice as it was known to prepare an insecticidally useful ester from the acid, as discussed supra.

C. Diligence

> [10] In order to prevail, Kondo must show diligence from immediately prior to the effective filing date of Martel, June 27, 1977. 35 USC 102(g).

Kondo argue that diligence in the United States emanated from three sources during the critical period prior to June 27 until reduction to practice:

1. Acts in Princeton done on behalf of Kondo in preparing the lactone in the United States.

2. Attorney's acts beginning in May, 1977.

3. Acts in Japan between June 22nd and the date of reduction to practice.

Martel argue that Kondo were not diligent from just prior to June 27, 1977 until reduction to practice in the United States as no steps were taken in this country to repeat the Kondo process until August 8, 1977, leaving a gap of five weeks of inactivity. Similarly, Martel urge that there was no attorney diligence as no actions were taken by patent counsel Dr. Hansen until August 9, 1977, at which time a search was requested from outside counsel which search results were not received until September 19. The inactivity of both should result in a grant of priority to Martel. We agree.

The three sources of activity relied upon by Kondo to prove diligence from just prior to June 27 until October 27 fail to do so particularly for the critical period between June 28 and July 25.

[11] Kondo may not rely upon their work or that of

their coworkers in Japan to provide diligence during this period. Their activities abroad, unaccompanied by any activities in the United States cannot be used in establishing diligence. The research done by Kondo was reported to FMC in the United States on a monthly basis. The reports were read, understood and circulated to a group of workers at FMC. However, the mere passive reading of the reports in this country was not diligence. To constitute diligence, there must be activity in this country resulting from the work of Kondo. Only activity engendered in this country by Kondo's work in Japan inures to the benefit of Kondo. Thus, acts done in Princeton in preparing the lactone of the count, or attorney's acts leading to the preparation ***52** of a patent application, would accrue to the benefit of the inventor for the purpose of showing diligence. However, acts done abroad may not be considered in establishing diligence in reducing the invention to practice. 35 USC 104; Wilson v. Sherts, 23 CCPA 914, 81 F.2d 755, 28 USPQ 379(1936).

As to the acts carried out in Princeton to prepare the lactone of the count, we find activity immediately prior to Martel's filing date, in the suggestion by C. E. Hatch, TCH 2 and TCH 3, to prepare the lactone of the count by an additional synthetic route in Ex. BA on June 24 and Ex. EM on June 27. This suggestion is followed by activity on July 25, TCH 4, when starting materials were obtained for the synthesis of the lactone which materials were sent for analysis to determine their purity.

The synthesis of the lactone of the count began on August 8, 1977 (Ex. BD), and proceeded diligently until reduction to practice. However, between June 27 and July 25 there is no evidence that any work was done on the Hatch "embodiment" of the Kondo process. Hatch testified, TCH 5, that he first, "took steps beginning 7/25/77 to attempt to perform the Hatch embodiment. * * *" However, nothing was done prior to 7/25/77 and we regard Hatch's statement as an admission that prior to 7/25/77 no work was done by him on the lactone synthesis. Accordingly, we find no diligence by the workers in Princeton on the synthesis of the lactone due to the four weeks of inactivity between June 27 and July 25.

As for attorney diligence, Dr. Hansen, FMC counsel, testified at RLH 4 that he awaited "receipt from the patent liaison at Princeton, N.J. of a report on the technical aspects of a project and the results of a literature search conducted by them before [FN5] instituting patent activity. * * *" The report referred to, Ex. FG, was sent to Dr. Hansen on July 29. The evidence indicates that the first action thereafter taken by Dr. Hansen was the ordering of a pre- examination search on August 9, Ex. FZ. Accordingly, patent counsel was not actively engaged in the preparation of a patent application during the critical period beginning just prior to June 27 and continuing through August 8.

The sole activity during the aforesaid critical period of time that could be considered as constituting attorney diligence was the efforts of the patent liaison individual E. Hoegburg. Between June 28 and July 29, we have three identifiable activities undertaken by Hoegburg. On June 28 Hoegburg forwarded a Patent Application Filing Request to H.R. Ertelt, Ex. FB. On July 12, he attended a patent review at Princeton, Ex. FF, and on July 29 the above report was sent to R. L. Hansen. As for the balance of the time Kondo relies on pages from Hoegburg's calendar purporting to show activity on the lactone case.

The pages on the calendar show time charged to the lactone project on most days between June 28 and July 29. Hoegburg is, however, unavailable to testify as to the specific acts performed by him during this period, having died in November 1977. Nor is there any testimony on the record stating what activities had been performed by Hoegburg at specific times directed to work preparatory to filing a patent application, and Hoegburg's calendar pages are not self explanatory.

Accordingly, we hold the calendar charges of Hoegburg in the absence of supporting evidence insufficient to show diligence during the period of June 27 to August 9. Cf. Naber v. Cricchi, 567 F.2d 382, 196 USPQ 294(CCPA 1977), cert. den., 439 U.S. 826, 200 USPQ 64(1978).

We conclude that during the period from just prior to June 27 through July 25, 1977, no diligence has been shown by Kondo. Therefore Martel are entitled to prevail in this interference.

Decision

For the foregoing reasons priority of invention of the subject matter in issue is awarded to Jacques Martel, Jean Tessier, Jean-Pierre Demoute and Jean Jolly, the senior party.

FN1 The testimony is in the form of stipulations pursuant to 37 CFR 1.272(c) as to what the witnesses would have testified

had they been called.

FN2 The testimony of the Kondo record is designated by an assigned letter sequence for each individual.

FN3 Exhibits of the Kondo record are designated herein as A-Z, AA-AZ, BA- BX, CA-CZ, DA-DZ, EA-EZ, FA-FZ, GA-GZ, HA-HZ, IA-IZ, and JA-JZ.

FN4 Conception of a species within a genus is sufficient to establish conception of the generic invention. Miller v. Walker, 214 USPQ 845 (Bd.Pat.Int.1982).

FN5 Emphasis ours.

P.T.O. Bd.Pat.Int.

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169 U.S.P.Q. 795
58 C.C.P.A. 1233, 442 F.2d 967
(Cite as: 169 U.S.P.Q. 795)

In re Lukach, Olson, and Spurlin

Court of Customs and Patent Appeals

No. 8517

Decided May 27, 1971

United States Patents Quarterly Headnotes

PATENTS
[1] Specification - Sufficiency of disclosure (§ 62.7)
Where applicant claims a class of compositions, he must describe that class in order to meet description requirement of 35 U.S.C. 112; however, invention claimed need not be described in ipsis verbis in order to satisfy this requirement.

PATENTS
[2] Patentability - Anticipation - In general (§ 51.201)
Specification - Sufficiency of disclosure (§ 62.7)
Description of a single embodiment of broadly claimed subject matter constitutes a description of the invention for anticipation purposes, but the same information in a specification might not alone be enough to provide a description of that invention for purposes of adequate disclosure.

PATENTS
Particular patents-Copolymers
Lukach, Olson, and Spurlin, Copolymers, all claims of application refused.

***795** Appeal from Board of Appeals of the Patent Office.

Application for patent of Carl A. Lukach, Setha G. Olson, and Harold M. Spurlin, Serial No. 442,186, filed Mar. 23, 1965; Patent Office Group 140. From decision rejecting all claims, applicants appeal. Affirmed.

Marion C. Staves, Wilmington, Del., for appellants.

S. Wm. Cochran (Fred W. Sherling of counsel) for Commissioner of Patents.

Before Rich, Almond, Baldwin, and Lane, Associate Judges, and Skelton, Judge, United States Court of Claims, sitting by designation.

Lane, Judge.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of all claims in appellants' application serial No. 442,186, filed March 23, 1965, for Copolymers. We affirm.

The application is stated to be a continuation of copending application serial No. 186,326, filed April 10, 1962, which we shall call the parent application. The parent application is stated to be a continuation-in-part of then copending application serial No. 82,417, filed January 13, 1961, now U. S. Patent 3,153,023. We shall call this application the grandparent. [FN1] The instant application and the parent appear to contain identical disclosures. However, in order to avoid a time bar under ***796** § 102(b) arising from appellants' British patent 857,183, issued to Hercules Powder Co., the complete specification of which was published December 29, 1960, appellants need the benefit of the filing date of the grandparent application.

One requirement for obtaining that benefit is that the invention now claimed has to have been disclosed in both the parent and grandparent applications "in the manner provided by the first paragraph of section 112." 35 U.S.C. 120. Whether it was so disclosed is the issue before us, all other requirements of § 120 being clearly met.

Each of the claims is drawn to copolymers of ethylene and propylene, the copolymers being defined by certain recited physical characteristics. Claim 1 is illustrative:

> 1. A solid elastomeric copolymer of ethylene and propylene having from about 25 mole % to about 60 mole % of repeating units derived from propylene, a reduced specific viscosity of at least about 1.3, a Mw/Mn ratio of at least 2.0 and less than about 3.0, a solubility in n-heptane at -15 degreesC. of at least about 93% by weight and a solubility in a mixture of equal volumes of n-heptane and acetone at 20 degreesC. of less than about 6% by weight, wherein at least 90% of the total copolymer has a propylene content

within 5 percentage units of the average composition.

The significance of these limitations is said to be as follows: The copolymers within the claim

1. Are solid. This is indicated by the recitations of "reduced specific viscosity of at least about 1.3" and "solubility in a mixture of equal volumes of n-heptane and acetone at 20 degreesC. of less than about 6% by weight."

2. Are elastomeric. This is indicated by the recitations "having from about 25 mole % to about 60 mole % of repeating units derived from propylene" and "a solubility in n-heptane at -15 degreesC. of at least about 93% by weight."

3. Are essentially homogeneous as to composition. This is indicated by the recitation "at least 90% of the total copolymer has a propylene content within 5 percentage units of the average composition."

4. Have a narrow molecular weight distribution. This is indicated by the recitations "a Mw/Mn ratio of at least 2.0 and less than 3.0."

We focus on the last-mentioned recitation. Mw stands for weight-average molecular weight, and Mn stands for number-average molecular weight. The computation of the value of each of these terms is apparently a complicated matter. See Billmeyer, Textbook of Polymer Science, pp. 56-57, 66-67 (1962). Appellants contend that the ratio Mw/Mn is a recognized indication of molecular weight distribution. This may be so. The examiner, however, was of the view that the "ratio of at least 2.0 and less than 3.0 is not supported in any of the parents." The board agreed, stating: "[T]he examiner's position is that the range recited in the claims is not disclosed in the earlier applications, and we do not find any disclosure of such a range." For this reason, among others, the board held that appellants were not entitled to the benefit of the grandparent application and hence affirmed the § 102(b) rejection.

As pointed out above, the question is whether the parent and grandparent applications disclose, "in the manner provided by the first paragraph of section 112," the invention now claimed. From the board's language it is apparently the description requirement, rather than the enablement provisions or best mode provision, of the first paragraph of § 112, which was considered not to have been met.

[1] It is undisputed by appellants that where an applicant claims, as here, a class of compositions, he must describe that class in order to meet the description requirement of the statute. See In re Ahlbrecht, 58 CCPA 848, 435 F.2d 908, 168 USPQ 293 (1971); In re DiLeone and Lucas, 58 CCPA 925, 436 F.2d 1404, 168 USPQ 592 (1971); In re DiLeone, 58 CCPA 934, 436 F.2d 1033, 168 USPQ 598 (1971). The question then is whether appellants have done so in the parent and grandparent applications. We agree with the examiner and the board that they have not.

Looking to the grandparent application, we find no express mention of the Mw/Mn ratio of the copolymers described therein. Appellants correctly argue, however, that the invention claimed does not have to be described in ipsis verbis in order to satisfy the description requirement of § 112. See, e.g., Henry J. Kaiser Co. v. McLouth Steel Corp., 257 F.Supp. 372, 429, 150 USPQ 239, 284 (E.D. Mich. 1966), affd., 400 F.2d 36, 158 USPQ 565 (6th Cir. 1968), cert. denied, 393 U.S. 1119, 160 USPQ 832 (1969).

The matter of what language constitutes sufficient description to support a claim of given breadth has been a troublesome question. See, e.g., the DiLeone cases and In re Ahlbrecht, supra. An especially difficult aspect of this problem has been the situations involving specifications which describe broader subject matter than is subsequently ***797** claimed, e.g., a genus when a subgenus is claimed. Appellants urge that in the instant case their grandparent application disclosed a genus of copolymers having, among other characteristics, "narrow molecular weight distribution," and that they are now further limiting the claims to the subgenus wherein the distribution is indicated by a Mw/Mn ratio between 2.0 and 3.0. They point out that the examiner has agreed that one of the working examples in the grandparent inherently describes a copolymer which would have a Mw/Mn ratio of 2.6. They then urge that this court's decision in In re Risse, 54 CCPA 1495, 378 F.2d 948, 154 USPQ 1 (1967), stands for the proposition that an applicant is entitled, as to a claimed subgenus, to the benefit of the filing date of a parent application if the parent discloses a genus wholly encompassing the claimed subgenus and also discloses a species within that subgenus.

We note, first of all, that the grandparent application here does not disclose any defined genus of which the presently claimed copolymers are a subgenus. The grandparent application states merely that the

molecular weight distribution of copolymers therein described is "narrow." As far as we know from the record, this term has no reasonably precise meaning in the art, and hence we are unable to tell what relationship, if any, exists between the grandparent disclosure and the presently claimed class of copolymers. Therefore, even if the rule appellants extract from Risse represents the law, it is inapplicable here.

We are thus left with the single example inherently disclosing a copolymer having a Mw/Mn ratio of 2.6. This single example does not alone provide support for the recited range from 2.0 to 3.0, and nothing has been brought to our attention to show that any other language in the grandparent application, taken together with the knowledge of persons skilled in the art, points to the recited range. Accordingly, the grandparent application does not, either expressly or inherently, disclose the invention now claimed, and appellant is not entitled to the benefit of the grandparent filing date. It follows that appellants cannot overcome the § 102(b) time bar arising from publication of the complete specification of their British patent.

[2] Appellants have raised a further point. They contend that "[t]here is an inconsistency constituting an inequity in rejecting the claims as fully met by the Hercules British patent under 35 U.S.C. 102, while at the same time holding that appellants cannot obtain the benefit of the filing date of the U. S. counterpart." What they are saying, in terms of the statute, is that if "the invention was * * * described" in the British reference within the meaning of § 102(b), there must have been a "description of the invention" in the corresponding grandparent application within the meaning of the first paragraph of § 112. This argument appears to overlook the law that the description of a single embodiment of broadly claimed subject matter constitutes a description of the invention for anticipation purposes (see, e.g., In re Ruscetta, 45 CCPA 968, 255 F.2d 687, 118 USPQ 101 (1958)), whereas the same information in a specification might not alone be enough to provide a description of that invention for purposes of adequate disclosure. See, e.g., In re Ahlbrecht, supra. There are other apparent anomalies between the requirements for claim- anticipating disclosures and for claim-supporting disclosures. See, e.g., In re Hafner, 56 CCPA 1424, 410 F.2d 1403, 161 USPQ 783 (1969). If the law in these situations really produces inequities, the proper remedy is in Congress.

The decision of the board is affirmed.

FN1 The grandparent was a continuation-in-part of application serial No. 796,261, filed March 2, 1959, now abandoned. This fact, however, is not critical to the issues before us.

Cust. & Pat.App.

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504 F.2d 1150
183 U.S.P.Q. 752
(Cite as: 504 F.2d 1150)

United States Court of Customs and Patent Appeals.

Felix F. MIKUS and Francis N. Shaffer, Appellants,
v.
Anselm WACHTEL, Appellee.

Patent Appeal No. 74-511.

Nov. 14, 1974.

Appeal from a decision of the Board of Patent Interferences, Interference No. 97,421, awarding priority of invention to other party. The Court of Customs and Patents Appeals, Markey, Chief Judge, held that where coinventor, attempting to prove priority of invention by actual reduction to practice, testified that he prepared certain phosphors within scope of interference count relating to a composition of matter which found utility in its property of fluorescence, and testimony was allegedly corroborated by an exihibit in form of a witnessed 'Record of Invention,' but the Board of Patent Interferences, in awarding priority of invention to other party, did not mention exhibit, in order to avoid a possible miscarriage of justice, case would be remanded to Board for a consideration of significance of exhibit.

Remanded.

West Headnotes

[1] Patents k90(5)
291k90(5)

A prior reduction to practice of the species precludes another party from claiming that he is the first inventor of the genus containing the species.

[2] Patents k91(3)
291k91(3)

The requirement for independent corroboration of testimony concerning a prior reduction to practice exists to insure, by proof that could not have been fabricated or falsified, that inventor actually prepared composition and knew it would work.

[3] Patents k91(3)
291k91(3)

To satisfy spirit of requirement for independent corroboration of testimony concerning a prior reduction to practice, all evidence must be considered, applying "rule of reason" standard, rather than some mechanical standard.

[4] Patents k113(8)
291k113(8)

Where coinventor, attempting to prove priority of invention by actual reduction to practice, testified that he prepared certain phosphors within scope of interference count relating to a composition of matter which found utility in its property of fluorescence, and testimony was allegedly corroborated by an exhibit in form of a witnessed "Record of Invention," but the Board of Patent Interferences, in awarding priority of invention to other party, did not mention exhibit, in order to avoid a possible miscarriage of justice, case would be remanded to Board for a consideration of significance of exhibit.

***1150** James Theodosopoulos, Danvers, Mass., attorney of record, for appellants.

William D. Palmer, Pittsburgh, Pa., attorney of record, for appellee.

Before MARKEY, Chief Judge, and RICH, BALDWIN, LANE and MILLER, judges.

***1151** MARKEY, Chief Judge.

This appeal is from the decision of the Board of Patent Interferences awarding priority of invention to the appellee. We remand for further consideration of the evidence.

The interference involves the application of Mikus et al., serial No. 709,213, filed February 29, 1968, and Wachtel's application serial No. 726,464, filed May 3, 1968. The subject matter at issue embodied in a single count is a composition of matter which finds utility in its property of fluorescence. The emitted light has a narrow range of wavelengths in the blue to blue-green part of the visible spectrum when excited with ultraviolet radiation or cathode rays. Thus, radiation visible to the human eye is produced from

that which is invisible.

The sole count of the interference is:

A luminescent composition consisting essentially of a matrix of halophosphate of alkaline-earth metal, wherein the alkaline-earth metal is calcium, barium, and/or strontium, the halogen is chlorine and/or bromine, and an activating proportion of divalent europium.

Priority Proofs and Board Opinion

Both parties, attempting to prove priority of invention by actual reduction to practice, presented documentary evidence and relied on stipulated testimony in the form of affidavits. Also, appellant argues that appellee's reduction to practice of one 'species' within the scope of the count was insufficient to support an award of priority to appellee.

On authority of Petisi v. Rennhard, 363 F.2d 903, 53 CCPA 1452 (1966), the board found August 14, 1967, the date of appellee's species reduction, to be its priority date.

The heart of the controversy involves the proofs presented by appellants. Shaffer, Mikus' co-inventor, testified that he prepared certain phosphors within the scope of the count. As supporting evidence, Shaffer referred, inter alia, to certain exhibit which comprised pages from his Technical Notebook. None of the pages bears a witnessing signature but all are signed and dated by Shaffer. The pages fail to appear in precise numerical sequence and many gaps exist between the pages presented. Appellants say the missing pages relate to non-relevant work. Onto certain of the presented pages are stapled reports of tests performed by others on compounds alleged to be within the scope of the count. The tests involved studies of the phosphor's Spectral Energy Distribution and X-ray diffraction. Those studies provide an indication of the quantity of light produced for each wavelength and of the particular crystalline form of the phosphor, respectively.

Appellants argue that the notebook pages and the analytical reports, with the analysts' supporting testimony, adequately corroborate the testimony of Shaffer on reduction to practice of a phosphor within the count. Appellee counters that none of the evidence establishes that the phosphor seen by the analysts contained the recited activator.

The board found that appellants' proofs were insufficient to serve as independent corroboration of the testimony of reduction to practice of the invention. The board concluded that the analysts' testimony did not establish the presence of the specific phosphor activator recited in the count and, therefore, failed to corroborate Shaffer's testimony regarding reduction to practice. Accordingly, the board awarded priority of invention to appellee.

OPINION

[1] We agree with the board's view respecting appellee's actual reduction to practice of a species within the scope of the count. A prior reduction to practice of the species precludes another party from claiming that he is the first inventor of the genus containing the species.

[2][3] The primary question to be resolved is whether the evidence of record constitutes sufficient corroboration of ***1152** appellants' testimony directed to preparation of a composition within the scope of the count, including the specified activator. The requirement for independent corroboration exists to insure, by proof that could not have been fabricated or falsified, that the inventor actually prepared the composition and knew it would work. Gianladis v. Kass, 324 F.2d 322, 51 CCPA 753 (1963). However, to satisfy the spirit of the requirement for corroboration, all of the evidence must be considered, applying a 'rule of reason' standard rather than some mechanical standard. Berry v. Webb, 412 F.2d 261, 56 CCPA 1272 (1969).

At oral argument appellants called attention to our recent opinion in Blicharz v. Hays, 496 F.2d 603 (CCPA 1974), which was not available to the board at the time of its decision herein. Blicharz involved an inventor's unsigned and unwitnessed notebook. Although we said that such a notebook per se would be insufficient to corroborate an inventor's testimony of actual reduction to practice, we held that a witnessed 'Record of Invention,' which was consistent with the notebook and had been promptly submitted to the patent department of Blicharz's employer, together with testimony of a witness (Weidenheimer), who observed the experiments recorded in Blicharz's notebook, did provide sufficient corroboration of Blicharz's testimony of actual reduction to practice on the claimed date.

A careful review of the instant record reveals that appellants' Exhibit BH is a 'Record of Invention.' It was signed by the inventors and two witnesses and dated November 4, 1965. Both witnesses testified to

having read, understood, and signed the document on its date. The parties treated Exhibit BH lightly before us and before the board. Appellants casually argue that Exhibit BH is one of several documents which corroborate Shaffer's testimony of actual reduction to practice. Appellee contends that the exhibit corroborates only conception, the witnesses testifying only to having read and understood the document.

[4] The paucity of argument on the significance of Exhibit BH does not aid us in reaching a decision. The board's opinion does not mention the exhibit, and our review of the decision below is impeded by our lack of knowledge of the significance the board placed on Exhibit BH. Because the probative value accorded a similar document in Blicharz, supra, was significant, the avoidance of a possible miscarriage of justice requires that we have the benefit of the Board's position on Exhibit BH in this case. We do not infer that the result here should be either different from or the same as that reached in Blicharz. Instead, every case must be decided on its own merits. However, because of the potential significance of appellants' Exhibit BH, a decision at this juncture without benefit of argument or elucidation of the board position would risk injustice.

Accordingly, we remand this cause to the Board of Patent Interferences to consider the extent of the significance of Exhibit BH and to take whatever further action it may deem advisable consistent with the present opinion.

Remanded.

504 F.2d 1150, 183 U.S.P.Q. 752

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214 U.S.P.Q. 295
1981 WL 46264 (Pat.& Tr. Office Bd.App.)
(Cite as: 214 U.S.P.Q. 295)

Mori, Yoshiaki, Takashi, and Kazuo
v.
Costain, Terry, Punja, and Cleare

Patent and Trademark Office Board of Patent Interferences

Decision dated Feb. 26, 1981

Patent No. 4,310,464 issued Jan. 12, 1982

United States Patents Quarterly Headnotes

PATENTS
[1] Interference -- Issues determined (§ 41.45)
Board of Patent Interferences lacks jurisdiction over question of examiner's denial of motion to substitute new count, since it is not ancillary to priority.

PATENTS
[2] Interference -- Counts (§ 41.20)
Count is vehicle for contesting priority of invention and need not be patentable under 35 U.S.C. 112 to party, i.e., fully supported by that party's application.

PATENTS
[3] Interference -- Dissolution -- Right to make counts (§ 41.305)
Interference -- Reduction to practice -- Constructive reduction (§ 41.755)
Party's foreign application need disclose only one species within scope of subject matter in issue to constitute constructive reduction to practice of invention of claim; neither Squires v. Corbett, 194 USPQ 513, nor Kawai v. Metlesics, 178 USPQ 158, overruled this principle; Squires overruled this principle for purposes of right to make by requiring party to support full scope of his claim corresponding to count in his involved application; however, for purposes of benefit, principle still applies.

PATENTS
[4] Interference -- Reduction to practice -- Constructive reduction (§ 41.755)
Kawai v. Metlesics, 178 USPQ 158, did not hold that requirements of 35 U.S.C. 112 must be met for full scope of involved count in order to obtain benefit for purposes of constructive reduction to practice; all that is necessary for constructive reduction to practice in earlier filed application is compliance with 35 U.S.C. 112 with respect to at least one species within scope of subject matter in issue.

PATENTS
Particular patents -- Lactones
Costain, Terry, Punja, and Cleare, Lactones, application, awarded priority against Mori, Yoshiaki, Takashi, and Kazuo, application.

***295** Patent interference No. 99,984 between Fumio Mori, Omura Yoshiaki, Nishida takashi, ***296** and Itoi Kazuo, application, Serial No. 705,176, filed July 14, 1976, accorded benefit of Japanese application No. 89,507, filed July 22, 1975, and Winston Costain, Bernard William Hugh Terry, Nazim Punja, and Peter John Vernon Cleare, application, Serial No. 702,732, filed July 6, 1976, accorded benefit of Great Britain application No. 29253/75, filed July 11, 1975. Priority awarded to party Costain.

Norman H. Stepno, E. Joseph Gess, and Burns, Doane, Swecker & Mathis, all of Alexandria, Va., for party Mori.

Paul N. Kokulis, Donald B. Deaver, and Cushman, Darby & Cushman, all of Washington, D.C., for party Costain.

Before Torchin and Weinberger, Examiners of Interferences, and Sofocleous, Acting Examiner of Interferences.

Sofocleous, Acting Examiner of Interferences.

This interference involves:

(1) An application of Mori et al. [Mori], junior party, assignors to Kuravay Co., Ltd.; and

(2) An application of Costain et al. [Costain], senior party, assignors to Imperial Chemical Industries, Limited.

Both parties filed briefs and appeared through counsel at final hearing.

The invention in issue is directed to a class of lactone derivatives. The sole count is:

A gamma -lactone derivative represented by the general formula:

Image 1 (1.25□ X 2.25□) Available for Offline Print

wherein R super1 and R super2 , respectively, mean an alkyl group of 1 to 5 carbon atoms; R super3 is a member selected from the class consisting of hydrogen, alkyl groups of 1 to 5 carbon atoms and cycloalkyl groups of 3 to 8 carbon atoms; Y is selected from the class consisting of X and -CHX- CHsub3 ; Xs are the same or different and each means a halogen atom.

The count is identical to claim 17 of Mori. Costain's claim 9 corresponds substantially to the count and is:

A lactone of the formula:

Image 2 (1□ X 2.75□) Available for Offline Print

wherein each Y is chlorine or bromine and R is hydrogen.

Background

During the motion period, Mori filed two motions, a motion to deny Costain the benefit of his application, filed in Great Britain and contingent upon the denial of that motion, a motion to substitute a narrower count. Both motions were transmitted to the Primary Examiner for decision and he denied both motions in his decision on motions on April 24, 1979. On that date, Mori was ordered to show good and sufficient cause why judgment pursuant to 37 CFR 1.225 should not be rendered against him since he alleged no date in his preliminary statement prior to the effective filing date of Costain, the senior party. On May 21, 1980, Mori filed a request for final hearing under 37 CFR 1.225 so that the Board could review the Primary Examiner's denial of the Mori motions.

[1] In response to this request, the Patent Interference Examiner set this case down for final hearing to consider such matters as may be pertinent under 37 CFR 1.258. Since the question of an examiner's denial of a motion to substitute a new count is not ancillary [FNa1] to priority, we lack jurisdiction over the matter. See Godtfredsen v. Banner, 598 F.2d 589, 202 USPQ 7 (CCPA 1979) and in particular those decisions noted in footnote 1 of the concurring opinion. Therefore the only issue before us is whether Costain is entitled to the benefit of his application, filed in Great Britain.

Costain's Benefit

Citing, inter alia, Kawai v. Metlesics, 480 F.2d 880, 178 USPQ 158 (CCPA 1978) and Squires v. Corbett, 560 F.2d 424, 194 USPQ 513 (CCPA 1977), Mori urges that the Costain British application cannot be relied upon for benefit because it does not satisfy the requirements of 35 USC 112, first paragraph, for the full scope of the count. Rather Mori contends that the application is "delimited only to certain gamma -butyrolactones" within the scope of the count but does not disclose the full scope of the count. Therefore, according to Mori, the Primary Examiner erred in denying the Mori motion to deny Costain the benefit of this application.

[2] ***297** Mori contends that Costain's British application does not disclose certain count limitations which do not appear in Costain's claim 9 which corresponds substantially to (is narrower than) the count. The count, however, is the vehicle for contesting priority of invention and the count, as distinguished from Costain's claim 9, need not be patentable under 35 USC 112 to Costain, i.e., fully supported by Costain's application. For a thorough discussion of the differences between a count and a party's claim corresponding thereto, see Squires v. Corbett, 194 USPQ at 518 and 519. Thus it is not required that Costain support the count limitations which do not appear in his claim 9.

[3] With respect to Costain's claim 9, it is a well settled principle that to constitute a constructive reduction to practice of the invention of claim 9, Costain's British application need disclose only one species within the scope of the subject matter in issue. Den Beste v. Martin, 252 F.2d 302, 116 USPQ 584 (CCPA 1958) and Hunt v. Treppschuh, 523 F.2d 1386, 187 USPQ 426 (CCPA 1975). Mori's reliance on Squires v. Corbett and Kawai v. Metlesics is not well taken because neither of these decisions overruled this principle.

The Squires decision overruled the Den Beste principle only as to the involved application for purposes of "right to make" by requiring a party to support in his involved application the full scope of his claim corresponding to the count. However, for purposes of benefit, the Den Beste principle still applies, as note Wiel v. Fritz, 572 F.2d 856, 196 USPQ 600 (CCPA 1978), footnote 16.

[4] The Kawai decision is not pertinent to the issue before us because the court only held:

> * * * that section 119 requires that a foreign application must meet the disclosure requirement of section 112 in the same way that a United States application must before the benefit of its filing date is accorded to a later United States application * * * [178 USPQ 167]

It did not hold that the requirements of 35 USC 112 must be met for the full scope of the involved count in order to obtain benefit for purposes of a constructive reduction to practice. All that is necessary for a constructive reduction to practice ("benefit") in an earlier filed application is compliance with 35 USC 112 with respect to at least one species within the scope of the subject matter in issue. See the decisions cited above, particularly Weil v. Fritz. Here, Mori does not dispute that at least one such species is so supported in Costain's British application and we find no reason to hold otherwise.

Accordingly we hold that Costain is entitled to the benefit of the filing date of his British application for a prior constructive reduction to practice.

Decision

In view of the foregoing, priority of invention of the subject matter of count 1 is awarded to Winston Costain, Bernard William Hugh Terry, Nazim Punja and Peter John Vernon Cleare, the senior party.

> FNa1 According to Rivise and Caesar, Interference Law and Practice, Vol. II, Sec. 251 (The Michie Co. 1943),

An ancillary question may be defined as a question which if decided in favor of the party raising the question would necessarily result in a judgment against his opponent.

P.T.O. Bd.Pat.Int.

214 U.S.P.Q. 295

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United States Court of Appeals,
Federal Circuit.

The REGENTS OF THE UNIVERSITY OF CALIFORNIA, Plaintiff-Appellant,
v.
ELI LILLY AND COMPANY, Defendant-Appellee.

No. 96-1175.

July 22, 1997.
Rehearing Denied; Suggestion for Rehearing In Banc Declined Oct. 24, 1997.

Regents of university which held patents relating to recombinant DNA technology brought infringement action against manufacturer of human insulin. The United States District Court for the Southern District of Indiana, S. Hugh Dillin, J., entered judgment for manufacturer on grounds that manufacturer did not infringe patents, that asserted claims of one patent were invalid, and that both patents were unenforceable. Regents appealed. The Court of Appeals, Lourie, Circuit Judge, held that: (1) transfer of action to district which directed pretrial proceedings was not barred by Eleventh Amendment; (2) transfer of venue was not abuse of discretion; (3) first patent was invalid for failure to comply with statutory written description requirement; (4) patent applicant did not engage in inequitable conduct by misrepresenting type of plasmid used in examples of patent application; (5) first patent was not unenforceable under doctrine of unclean hands; (6) manufacturer did not infringe second patent; and (7) patent applicant did not engage in inequitable conduct by failing to disclose reference that was cumulative.

Affirmed in part and reversed in part.

West Headnotes

[1] **Federal Courts** 265
170Bk265 Most Cited Cases

Transfer of state university's patent infringement claim against manufacturer of human insulin to district court in another state did not violate Eleventh Amendment, as state itself asserted claim and did not have any claims asserted against it. U.S.C.A. Const.Amend. 11.

[2] **Federal Courts** 110
170Bk110 Most Cited Cases

District court in Indiana, which conducted pretrial proceedings in consolidated cases relating to recombinant DNA technology, did not abuse its discretion by transferring venue for trial on merits, in patent infringement case, from district court in California to itself, even though Indiana court emphasized judicial economy over other factors, which court found did not favor either party. 28 U.S.C.A. § 1404(a).

[3] **Federal Courts** 101
170Bk101 Most Cited Cases

Consideration of interest of justice, which includes judicial economy, may be determinative to particular motion to transfer venue, even if convenience of parties and witnesses might call for different result. 28 U.S.C.A. § 1404(a).

[4] **Federal Courts** 915
170Bk915 Most Cited Cases

Patent infringement plaintiff waived claim that transfer of its action by district court which conducted pretrial proceedings in consolidated cases, for trial on merits before that court, was barred by statute, where plaintiff failed to raise claim in opening brief on appeal from final judgment, notwithstanding fact that plaintiff asserted claim in petition for mandamus seeking to vacate transfer order for consolidation of discovery. 28 U.S.C.A. § 1407(a); F.R.A.P.Rule 28(a)(6), (c), 28 U.S.C.A.

[5] **Patents** 314(5)
291k314(5) Most Cited Cases

[5] **Patents** 324.5
291k324.5 Most Cited Cases

Whether patent specification complies with statutory written description requirement is question of fact, which Court of Appeals reviews for clear error on appeal from bench trial. 35 U.S.C.A. § 112.

[6] **Patents** 99
291k99 Most Cited Cases

To fulfill statutory written description requirement, patent specification must describe invention and do so in sufficient detail that one skilled in the art can clearly conclude that inventor invented claimed

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invention. 35 U.S.C.A. § 112.

[7] Patents 98
291k98 Most Cited Cases

Patent applicant complies with statutory written description requirement by describing invention, with all its claimed limitations, not that which makes it obvious, and by using such descriptive means as words, structures, figures, diagrams, and formulas that set forth claimed invention. 35 U.S.C.A. § 112.

[8] Patents 98
291k98 Most Cited Cases

Adequate written description of DNA that is subject of patent requires precise definition, such as by structure, formula, chemical name, or physical properties, not mere wish or plan for obtaining claimed chemical invention, and, thus, adequate written description of a DNA requires more than mere statement that it is part of invention and reference to potential method for isolating it but requires description of DNA itself.

[9] Patents 99
291k99 Most Cited Cases

Claim of patent directed to recombinant procaryotic microorganism modified to encode human insulin was invalid, because patent specification did not fulfill statutory written description requirement; although specification provided adequate written description of rat cDNA, it provided only general method of producing human insulin cDNA, not written description of human insulin cDNA, as required by asserted claim. 35 U.S.C.A. § 112.

[10] Patents 98
291k98 Most Cited Cases

Claims of patent relating to recombinant DNA technology which generically recited cDNA encoding vertebrate insulin, claim which was directed generically to cDNA encoding mammalian insulin, and dependent claims which recited cDNA encoding vertebrate insulin did not adequately describe claimed invention for plasmid and microorganism that produced human insulin, notwithstanding disclosure of particular species within scope of those generic claims. 35 U.S.C.A. § 112.

[11] Patents 99
291k99 Most Cited Cases

Patent specification's written description of invention involving chemical genus, like description of chemical species, requires precise definition, such as by structure, formula, or chemical name, of claimed subject matter sufficient to distinguish it from other materials. 35 U.S.C.A. § 112.

[12] Patents 98
291k98 Most Cited Cases

Description requirement of patent statute requires description of invention, not indication of result that one might achieve if one made that invention. 35 U.S.C.A. § 112.

[13] Patents 98
291k98 Most Cited Cases

Description of genus of cDNAs referred to in patent may be achieved by means of recitation of representative number of cDNAs, defined by nucleotide sequence, falling within scope of genus or of recitation of structural features common to members of genus, which features constitute substantial portion of genus. 35 U.S.C.A. § 112.

[14] Patents 97
291k97 Most Cited Cases

District court abused its discretion in finding that applicant for patent relating to recombinant DNA technology engaged in inequitable conduct before Patent and Trademark Office (PTO) by violating National Institutes of Health (NIH) guidelines on use of plasmids and misrepresenting type of plasmid used in examples of patent application, absent evidence that noncompliance with guidelines or distinction between plasmid named in examples and plasmid actually used would have been considered material by reasonable patent examiner.

[15] Patents 97
291k97 Most Cited Cases

Determination of inequitable conduct in obtaining patent is committed to district court's discretion, and Court of Appeals thus reviews district court's judgment for abuse of discretion.

[16] Patents 324.54
291k324.54 Most Cited Cases

To overturn discretionary ruling of district court

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regarding inequitable conduct in applying for patent, appellant must establish that ruling is based on clearly erroneous findings of fact or on misapplication or misinterpretation of applicable law, or evidences clear error of judgment on part of district court.

[17] **Patents** 97
291k97 Most Cited Cases

Alleged patent infringer asserting inequitable conduct defense must demonstrate by clear and convincing evidence that applicant or applicant's attorney either failed to disclose material information or submitted false material information to Patent and Trademark Office (PTO) and that applicant or attorney did so with an intent to deceive PTO; information is material if reasonable examiner would have considered it important to patentability of claim.

[18] **Patents** 97
291k97 Most Cited Cases

Patent relating to recombinant DNA technology was not unenforceable under doctrine of "unclean hands," based on applicant's alleged misrepresentation of type of plasmid used in examples of patent application, absent proof that misrepresentation was material.

[19] **Patents** 250
291k250 Most Cited Cases

[19] **Patents** 251
291k251 Most Cited Cases

Manufacturer of human insulin which used semi-synthetic DNA to yield cleavable fusion protein did not infringe, either literally or under doctrine of equivalents, patent for invention which directly expressed human proinsulin (PI); patentee surrendered coverage of constructs which expressed recombinant fusion protein to overcome prior art rejections.

[20] **Patents** 226.6
291k226.6 Most Cited Cases

In determining whether patent has been infringed, claim must first be properly construed to determine its scope and meaning, and, second, claim as properly construed must be compared to accused device or process.

[21] **Patents** 314(5)
291k314(5) Most Cited Cases

[21] **Patents** 324.5
291k324.5 Most Cited Cases

Claim construction, in patent infringement action, is question of law which Court of Appeals reviews de novo; proper construction of claims is based upon claim language, specification, prosecution history, and, if necessary to aid court's understanding of patent, extrinsic evidence.

[22] **Patents** 314(5)
291k314(5) Most Cited Cases

[22] **Patents** 324.5
291k324.5 Most Cited Cases

Determining whether particular device infringes properly construed patent claim is question of fact which Court of Appeals reviews for clear error on appeal from bench trial.

[23] **Patents** 226.6
291k226.6 Most Cited Cases

To prove patent infringement, patentee must show that accused device includes every limitation of asserted claim or equivalent of each limitation.

[24] **Patents** 168(2.6)
291k168(2.6) Most Cited Cases

In construing patent claims in view of prosecution history or in deciding whether to estop patentee from asserting certain range of equivalents, court may only explore reason (right or wrong) for objection and manner in which amendment addressed and avoided objection.

[25] **Patents** 168(2.6)
291k168(2.6) Most Cited Cases

When patent claim has been narrowed by amendment for substantial reason related to patentability, such as to avoid prior art rejection, patentee may not assert that surrendered subject matter is within range of equivalents.

[26] **Patents** 314(5)
291k314(5) Most Cited Cases

[26] **Patents** 324.5

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291k324.5 Most Cited Cases

Application of prosecution history estoppel in patent infringement action is question of law subject to de novo review.

[27] Patents 97
291k97 Most Cited Cases

District court abused its discretion in finding that applicant for patent relating to recombinant DNA technology engaged in inequitable conduct before Patent and Trademark Office (PTO) by failing to disclose related European patent application, because, even if it was material, application was merely cumulative of materials already before PTO.

[28] Patents 97
291k97 Most Cited Cases

Even where patent applicant fails to disclose otherwise material prior art reference, that failure will not support finding of inequitable conduct if reference is simply cumulative to other references, such that reference teaches no more than what reasonable examiner would consider to be taught by prior art already before Patent and Trademark Office (PTO).

Patents 328(2)
291k328(2) Most Cited Cases

4,431,740. Not infringed.

Patents 328(2)
291k328(2) Most Cited Cases

4,652,525. Invalid.

Harold J. McElhinny, Morrison & Foerster LLP, San Francisco, CA, argued for plaintiff-appellant. With him on the brief were Donald S. Chisum, Alan K. Palmer, Rachel Krevans, and Debra A. Shetka. Also with him on the brief were Arthur I. Neustadt, Jean-Paul Lavalleye, Marc R. Labgold, and William J. Healey, Oblon, Spivak, McClelland, Maier & Neustadt, P.C., Arlington, VA. Of counsel was Gladys H. Monroy, Morrison & Foerster LLP, San Francisco, CA.

Charles E. Lipsey, Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., Washington, DC, argued for defendant-appellee. With him on the brief were Donald R. Dunner, Howard W. Levine, and John R. Alison. Of counsel on the brief was Amy E. Hamilton, Eli Lilly and Company, Indianapolis, IN.

Before NEWMAN, LOURIE, and BRYSON, Circuit Judges.

LOURIE, Circuit Judge.

The Regents of the University of California (UC) appeal from the judgment of the District Court for the Southern District of Indiana, holding that Eli Lilly & Company (Lilly) does not infringe U.S. Patent 4,652,525 or U.S. Patent 4,431,740 in its manufacture of human insulin; that the asserted claims of the '525 patent are invalid; and that both patents are unenforceable. *Regents of the Univ. of Cal. v. Eli Lilly and Co.*, 39 USPQ2d 1225 (S.D.Ind.1995). We hold that the district court (1) properly exercised jurisdiction over this case for trial on the merits, (2) did not err in concluding that the asserted claims of the '525 patent are invalid for failure to provide an adequate written description of the subject matter of the asserted claims, and (3) did not clearly err in finding that Lilly did not infringe the '740 patent. We further hold that the district court (4) abused its discretion in holding that the '525 and '740 patents are unenforceable. We therefore affirm-in-part and reverse-in-part.

BACKGROUND

In 1990, UC brought this action in the Northern District of California, alleging that Lilly was infringing claims 1, 2, and 4-7 of the '525 patent under the doctrine of equivalents and infringing claims 2-3, 5-6, 8-10, and 13- 14 of the '740 patent, either literally or under the doctrine of equivalents. Lilly responded that it does not infringe any of the asserted claims, that the asserted claims are invalid, and that the patents are unenforceable. Lilly did not assert any counterclaims against UC.

The patents in suit relate to recombinant DNA technology [FN1] and, more specifically, to recombinant plasmids and microorganisms that produce human insulin, a protein involved in the regulation of sugar metabolism. A person unable to produce insulin is afflicted with diabetes. Prior to the development of recombinant techniques for the production of human insulin, diabetic patients were treated with injections of animal insulin, which often caused allergic reactions. Human insulin produced by recombinant methods is less likely to produce

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such reactions. It consists of two separate amino acid chains, a 21-amino acid A chain and a 30-amino acid B chain, which are linked only by disulfide bonds. Healthy people produce insulin *in vivo* via the terminal enzymatic cleavage of preproinsulin (PPI) to yield proinsulin (PI), a single amino acid chain consisting of the A and B chains, linked by a sequence of additional amino acids that positions the A and B chains so that the disulfide bonds are readily formed. The PI is then further cleaved to liberate the linking sequence and yield insulin.

> FN1. For a detailed discussion of recombinant DNA technology, see *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1207-08 n. 4, 18 USPQ2d 1016, 1022 n. 4 (Fed.Cir.1991) and *In re O'Farrell*, 853 F.2d 894, 895- 99, 7 USPQ2d 1673, 1674-77 (Fed.Cir.1988) and references therein.

The '525 patent, the application for which was filed in May 1977, was based upon the determination of the PI and PPI cDNA sequences found in *rats*. Claim 1 of that patent ***1563** reads as follows: "A recombinant *plasmid* replicable in procaryotic host containing within its nucleotide sequence a subsequence having the structure of the reverse transcript of an mRNA of a *vertebrate*, which mRNA encodes insulin." (emphasis added). Claim 2 relates to a recombinant procaryotic *microorganism* containing *vertebrate* insulin-encoding cDNA. Claims 4 and 5 depend from claim 2, and are limited, respectively, to *mammalian* and *human* insulin cDNA. Claim 6 depends from claim 1 and requires that the plasmid contain "at least one genetic determinant of the plasmid col E1." Claim 7 depends from claim 2 and requires that the microorganism be of a particular strain.

The '740 patent, the application for which was filed in September 1979, was based upon the determination of *human* PPI and PI cDNA sequences and the development of "tailoring" techniques for the incorporation of human PI cDNA into a recombinant plasmid. Using these techniques, a specific semi-synthetic DNA may be incorporated into a suitable transfer vector. Using one such tailoring technique, the human PI cDNA and the plasmid into which it is incorporated may be modified so that they contain complimentary oligo-dC and oligo-dG ends, which facilitate the formation of the recombinant plasmid. Independent claim 2 of the '740 patent reads: "A DNA transfer vector *comprising* an inserted cDNA *consisting essentially of* a deoxynucleotide sequence coding for human proinsulin, the plus strand of said cDNA having a defined 5' end, said 5' end being the first deoxynucleotide of the sequence coding for said proinsulin." (emphasis added). Dependent claim 3 is directed, *inter alia*, to a recombinant microorganism containing the transfer vector of claim 2. Claim 5 reads: "A DNA transfer vector *comprising* a deoxynucleotide sequence coding for human proinsulin *consisting essentially of* a plus strand having the sequence: [nucleotides that encode human proinsulin, described in structural terms]." (emphasis added). Claim 6 depends from claim 5 in the same manner that claim 3 depends from claim 2: it is directed to a recombinant microorganism containing the transfer vector of claim 5. Claim 8 is directed to an example of a human PI-encoding recombinant plasmid described in the specification; and claims 9 and 10, to microorganisms containing that plasmid. Claims 13 and 14 are directed to a subset of the transfer vector genus of claim 5 and accordingly depend from claim 5.

Lilly makes human PI using a semi-synthetic DNA to yield a cleavable *fusion protein* [FN2] that consists of a bacterial protein, a "cleavable linkage" consisting of a single methionine residue, and human PI. After the fusion protein is produced, the desired human PI is obtained by cleaving it from the remainder of the fusion protein.

> FN2. For a detailed discussion of fusion proteins, see *Schendel v. Curtis*, 83 F.3d 1399, 1400 & n. 3, 38 USPQ2d 1743, 1744 & n. 3 (Fed.Cir.1996).

In 1992, pursuant to 28 U.S.C. § 1407 (1994), the Judicial Panel on Multidistrict Litigation (JPML) consolidated this case with five other related cases for pre-trial proceedings in the District Court for the Southern District of Indiana. *In re Recombinant DNA Tech. Patent and Contract Litig.*, No. 912 (J.P.M.L. Feb. 19, 1992). UC petitioned this court for a writ of mandamus, seeking to vacate the transfer order as barred by the Eleventh Amendment and inconsistent with various prior decisions in the consolidated cases, including two decisions of the District Court for the Northern District of California in this case. *See In re Regents of the Univ. of Cal.*, 964 F.2d 1128, 1131-32, 22 USPQ2d 1748, 1751-52 (Fed.Cir.1992). We denied UC's petition, holding that the transfer did not force unconsented suit upon UC and thus was permissible for purposes of pretrial

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discovery. *Id.*, at 1134, 964 F.2d 1128, 22 USPQ2d at 1754.

In 1994, responding to Lilly's pretrial motion, the District Court for the Southern District of Indiana transferred venue to itself for trial on the merits pursuant to 28 U.S.C. § 1404(a) (1994). After conducting a bench trial, the court issued a memorandum opinion in which it ruled, *inter alia,* that (1) Lilly does not infringe the asserted claims of either patent, 39 USPQ2d at 1228-39, (2) the asserted claims of the '525 patent, those directed ***1564** to mammalian, vertebrate, and human cDNA, are invalid for lack of an adequate written description, *id.* at 1239-41, and (3) both patents are unenforceable due to inequitable conduct on the part of UC, *id.* at 1247-58. UC appeals from these rulings. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1) (1994).

DISCUSSION

A. *Jurisdiction and Venue*

[1] As a preliminary matter, UC argues that the District Court for the Southern District of Indiana lacked jurisdiction to hear this case on the merits and was an inappropriate venue for trial. UC first argues that the Eleventh Amendment deprives the Indiana court of jurisdiction. Specifically, UC asserts that by choosing to bring suit in the District Court for the Northern District of California, it waived its Eleventh Amendment immunity only in California federal courts. Relying on *Port Authority Trans-Hudson Corp. v. Feeney,* 495 U.S. 299, 307, 110 S.Ct. 1868, 1873-74, 109 L.Ed.2d 264 (1990), UC argues that the Eleventh Amendment bars the transfer of this case for trial on the merits. Lilly responds that the Eleventh Amendment is inapplicable where, as here, a state asserts a claim and no counterclaim against the state is involved. We agree with Lilly that the Eleventh Amendment does not preclude trial in Indiana.

The Eleventh Amendment provides that: "The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State." U.S. Const. amend. XI. The Supreme Court has recently confirmed that "the reference to actions 'against one of the United States' encompasses not only actions in which a State is named as a defendant, but also certain actions against state agents and state instrumentalities," such as UC. *Regents of the Univ. of Cal. v. Doe,* 519U.S. 425, ----, 117 S.Ct. 900, 903, 137 L.Ed.2d 55 (1997); *see also BV Eng'g v. Univ. of Cal.,* 858 F.2d 1394, 1395, 8 USPQ2d 1421, 1422 (9th Cir.1988).

The question raised by this case is whether it is one that has been brought "against" UC. In deciding this question, we are aided by the Supreme Court's guidance in its opinion in *United States v. Peters,* 9 U.S. (5 Cranch) 115, 3 L.Ed. 53 (1809) (Marshall, C.J.). In that case, the Court declined to apply the Eleventh Amendment to bar a suit instituted against the heirs of a deceased state treasurer. The Court stated:

> The right of a state to assert, as plaintiff, any interest it may have in a subject, which forms the matter in controversy between individuals, in one of the courts of the United States, is not affected by [the Eleventh] amendment; nor can [the amendment] be so construed as to oust the court of its jurisdiction, should such claim be suggested. The amendment simply provides, that no suit shall be commenced or prosecuted against a state. The state cannot be made a defendant to a suit brought by an individual; but it remains the duty of the courts of the United States to decide all cases brought before them by citizens of one state against citizens of a different state, where a state is not necessarily a defendant.

Id. at 139. This case involves a state's assertion of a claim rather than a state being a defendant.

In the *Feeney* case relied on by UC, the Court applied the Eleventh Amendment because a claim for damages was asserted "against" a state instrumentality. The *Feeney* Court noted that "a State's Constitutional immunity encompasses not merely *whether* it may be sued, but *where* it may be sued," 495 U.S. 299, 307, 110 S.Ct. 1868, 1873-74, 109 L.Ed.2d 264 (quoting *Pennhurst State Sch. & Hosp. v. Halderman,* 465 U.S. 89, 99, 104 S.Ct. 900, 907, 79 L.Ed.2d 67 (1984)), but the Court did not construe the Eleventh Amendment to apply to suits in which a state is solely a plaintiff, as UC is here. In fact, we do not believe that the Court has ever so construed the Eleventh Amendment. This is because the Eleventh Amendment applies to suits "against" a state, not suits by a state. Thus, we need not determine whether UC waived its immunity only in California, because this case does not create an Eleventh ***1565** Amendment jurisdictional issue concerning which the question of waiver even arises. This case only involves UC's patent infringement claims and Lilly's defenses; it does not involve any claim or counterclaim *against* UC that places UC in

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the position of a defendant. Accordingly, we conclude that the Eleventh Amendment does not deprive the Indiana district court of jurisdiction in this case.

[2] UC next argues that, under the law of the regional circuit to which appeal from the trial court would normally lie, the Indiana court abused its discretion by, as the court stated, transferring venue for trial on the merits from the California court to itself. *See* Heller Fin., Inc. v. Midwhey Powder Co., 883 F.2d 1286, 1293 (7th Cir.1989) (applying the abuse of discretion standard of review); Lou v. Belzberg, 834 F.2d 730, 739 (9th Cir.1987) (same). Specifically, UC argues that the Indiana court abused its discretion by, *inter alia,* affording too much weight to the element of judicial economy in granting Lilly's motion to transfer the case to Indiana. [FN3] Lilly responds that the court acted within its discretion by retaining the case for trial and that it properly considered and weighed the relevant factors before deciding to do so.

> FN3. UC also argues that the Indiana court abused its discretion by erroneously determining that UC could have brought this suit in Indiana without the state of California's consent, by overruling inconsistent decisions of the California district court, and by failing to give special weight to UC's choice of forum. We have considered these arguments and do not find them to be persuasive.

[3] We agree with Lilly that the court did not err on this point. A federal district court may "[f]or the convenience of parties and witnesses, in the interest of justice, ... transfer any civil action to any other district court or division where it might have been brought." 28 U.S.C. § 1404(a) (1994). The Indiana court based its decision to retain the case for trial on the merits on its finding that, although the convenience of the parties and witnesses did not favor either the Indiana or the California court, the interests of judicial economy would be served by trial in the Indiana court. Consideration of the interest of justice, which includes judicial economy, "may be determinative to a particular transfer motion, even if the convenience of the parties and witnesses might call for a different result." Coffey v. Van Dorn Iron Works, 796 F.2d 217, 220-21 (7th Cir.1986); Allen v. Scribner, 812 F.2d 426, 436-37 (9th Cir.1987) ("Because the transfer of this case undoubtedly would have led to delay, the district court did not abuse its discretion in denying Allen's motion notwithstanding possible inconvenience to the witnesses."); Commodity Futures Trading Comm'n v. Savage, 611 F.2d 270, 279 (9th Cir.1979) (affirming denial of transfer motion because "[t]he district court was familiar with the case and transfer may have led to delay"). Thus, the fact that the district court ultimately afforded little or no weight to the other factors does not, standing alone, indicate that the district court abused its discretion. On the contrary, in a case such as this in which several highly technical factual issues are presented and the other relevant factors are in equipoise, the interest of judicial economy may favor transfer to a court that has become familiar with the issues. Accordingly, the court did not abuse its discretion by transferring the case after affording determinative weight to the consideration of judicial economy.

[4] In its reply brief, UC first raises another basis for determining that Indiana was an improper venue for trial. UC argues that 28 U.S.C § 1407(a) (1994) requires that a case transferred by the JPML for consolidated pretrial proceedings be returned for trial on the merits to the court from which it was transferred. Aware that it failed to address this issue in its opening brief in this appeal, UC contends that it adequately raised this argument when it filed its petition for mandamus seeking to vacate the transfer order for consolidation of discovery in Indiana. *See* In re Regents, 964 F.2d 1128, 22 USPQ2d 1748. Lilly first responds that UC waived this argument by failing to raise it in its opening brief in this appeal, regardless of the argument it made in its earlier petition. Lilly also maintains that the transfer was lawful, citing ***1566***In re American Continental Corp./Lincoln Savings & Loan Securities Litigation,* 102 F.3d 1524 (9th Cir.1996), *cert. granted sub nom., Lexecon Inc. v. Milberg Weiss Bershad Hynes & Lerach,* 520 U.S. 1227, 117 S.Ct. 1818, 137 L.Ed.2d 1026, 65 U.S.L.W. 3761 (1997) (No. 96-1482), for the proposition that § 1407(a) does not prohibit a discovery transferee court from transferring a case to itself for trial if an adequate reason for that transfer exists under 28 U.S.C. § 1404(a) (1994).

We agree with Lilly insofar as it argues that UC waived its argument regarding § 1407 by failing to raise it in its opening brief in this appeal. *See* Fed. R.App. P. 28(a)(6), 28(c); Becton Dickinson & Co. v. C.R. Bard, Inc., 922 F.2d 792, 800, 17 USPQ2d 1097, 1103 (Fed.Cir.1990) ("[A]n issue not raised by an appellant in its opening brief ... is waived."). UC's assertion that it adequately raised this argument when

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it filed its petition for mandamus is not persuasive. In denying that petition, we noted that UC expressed concern that, *inter alia,* "Lilly will maneuver to try the merits of the California actions in Indiana ... thus defeating [UC's] expectation and entitlement that the merits of the California actions will be tried in California." *In re Regents,* 964 F.2d at 1133, 22 USPQ2d at 1753. However, we declined to address UC's concern then because "[t]hese possibilities can not be evaluated in the abstract." *Id.* An assertion that the district court had actually erred was required, not the mere assertion that UC feared a potential error. We thus told UC that if it desired to contest the Indiana court's self-transfer, it would be required to raise that issue if and when the Indiana court actually transferred the case to itself. Because UC failed to do so by asserting error in a writ of mandamus or in its opening brief in this appeal, we decline to address the merits of its argument. Having determined that the Indiana court had jurisdiction and that its transfer of venue to itself under § 1404 was not, given the arguments properly before us, an abuse of that court's discretion, we address the remaining issues in UC's appeal.

B. *The '525 Patent*

1. *Validity*

The district court ruled that all of the claims of the '525 patent that UC asserted against Lilly, *viz.,* claims 1, 2, and 4-7, are invalid under § 112, ¶ 1, because the specification, although it provided an adequate written description of rat cDNA, did not provide an adequate written description of the cDNA required by the asserted claims. 39 USPQ2d at 1239-41.

[5][6][7] Whether a specification complies with the written description requirement of § 112, ¶ 1, is a question of fact, which we review for clear error on appeal from a bench trial. *Vas-Cath Inc. v. Mahurkar,* 935 F.2d 1555, 1563, 19 USPQ2d 1111, 1116 (Fed.Cir.1991); *Ralston Purina Co. v. Far-Mar-Co, Inc.,* 772 F.2d 1570, 1575, 227 USPQ 177, 179 (Fed.Cir.1985). To fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention." *Lockwood v. American Airlines, Inc.,* 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (1997); *In re Gosteli,* 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed.Cir.1989) ("[T]he description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed."). Thus, an applicant complies with the written description requirement "by describing the invention, with all its claimed limitations, not that which makes it obvious," and by using "such descriptive means as words, structures, figures, diagrams, formulas, etc., that set forth the claimed invention." *Lockwood,* 107 F.3d at 1572, 41 USPQ2d at 1966.

[8] An adequate written description of a DNA, such as the cDNA of the recombinant plasmids and microorganisms of the '525 patent, "requires a precise definition, such as by structure, formula, chemical name, or physical properties," not a mere wish or plan for obtaining the claimed chemical invention. *Fiers v. Revel,* 984 F.2d 1164, 1171, 25 USPQ2d 1601, 1606 (Fed.Cir.1993). Accordingly, "an adequate written description of a DNA requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it; what is ***1567** required is a description of the DNA itself." *Id.* at 1170, 25 USPQ2d at 1606.

[9] We first consider claim 5, which is specific to a microorganism containing a human insulin cDNA. UC argues that the district court clearly erred in finding that claim 5 is invalid under § 112, ¶ 1. Specifically, UC argues that a constructive or prophetic example in the '525 specification describes in sufficient detail how to prepare the claimed organism. Lilly responds that the district court properly applied the written description requirement, as this court applied it in *Fiers,* 984 F.2d at 1170-71, 25 USPQ2d at 1605-06, and thus did not clearly err in finding that the cDNA encoding human insulin required by claim 5 is not adequately described in the '525 patent.

Claim 5 is directed to a recombinant procaryotic microorganism modified so that it contains "a nucleotide sequence having the structure of the reverse transcript of an mRNA of a [human], which mRNA encodes insulin." Thus, the definition of the claimed microorganism is one that requires human insulin- encoding cDNA. The patent describes a method of obtaining this cDNA by means of a constructive example, Example 6. This example, however, provides only a general method for obtaining the human cDNA (it incorporates by reference the method used to obtain the rat cDNA) along with the amino acid sequences of human insulin A and B chains. Whether or not it provides an enabling disclosure, it does not provide a written description of the cDNA encoding human insulin, which is necessary to provide a written description of the subject matter of claim 5. The name cDNA is not

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itself a written description of that DNA; it conveys no distinguishing information concerning its identity. While the example provides a process for obtaining human insulin-encoding cDNA, there is no further information in the patent pertaining to that cDNA's relevant structural or physical characteristics; in other words, it thus does not describe human insulin cDNA. Describing a method of preparing a cDNA or even describing the protein that the cDNA encodes, as the example does, does not necessarily describe the cDNA itself. No sequence information indicating which nucleotides constitute human cDNA appears in the patent, as appears for rat cDNA in Example 5 of the patent. Accordingly, the specification does not provide a written description of the invention of claim 5.

As indicated, Example 6 provides the amino acid sequence of the human insulin A and B chains, but that disclosure also fails to describe the cDNA. Recently, we held that a description which renders obvious a claimed invention is not sufficient to satisfy the written description requirement of that invention. *Lockwood*, 107 F.3d at 1572, 41 USPQ2d at 1966. We had previously held that a claim to a specific DNA is not made obvious by mere knowledge of a desired protein sequence and methods for generating the DNA that encodes that protein. *See, e.g., In re Deuel*, 51 F.3d 1552, 1558, 34 USPQ2d 1210, 1215 (1995) ("A prior art disclosure of the amino acid sequence of a protein does not necessarily render particular DNA molecules encoding the protein obvious because the redundancy of the genetic code permits one to hypothesize an enormous number of DNA sequences coding for the protein."); *In re Bell*, 991 F.2d 781, 785, 26 USPQ2d 1529, 1532 (Fed.Cir.1993). Thus, *a fortiori*, a description that does *not* render a claimed invention obvious does not sufficiently describe that invention for purposes of § 112, ¶ 1. Because the '525 specification provides only a general method of producing human insulin cDNA and a description of the human insulin A and B chain amino acid sequences that cDNA encodes, it does not provide a written description of human insulin cDNA. Accordingly, the district court did not err in concluding that claim 5 is invalid for failure to provide an adequate written description.

[10] UC also argues that the district court erred in holding claims 1 and 2, which *generically* recite cDNA encoding vertebrate insulin, and claim 4, which is directed *generically* to cDNAencoding mammalian insulin, invalid. Dependent claims 6 and 7 similarly recite cDNA encoding vertebrate insulin. In support of this argument, UC cites the disclosure of a species (the rat insulin-encoding cDNA) within the scope of those generic claims. UC argues, citing ***1568***In re Angstadt*, 537 F.2d 498, 190 USPQ 214 (Cust. & Pat.App. 1976) and *Utter v. Hiraga*, 845 F.2d 993, 6 USPQ2d 1709 (Fed.Cir.1988), that because the '525 specification meets the requirements of § 112, ¶ 1, for a species within both of these genera, the specification necessarily also describes these genera. Lilly responds that the district court did not clearly err in finding that cDNA encoding mammalian and vertebrate insulin were not adequately described in the '525 patent, because description of one species of a genus is not necessarily a description of the genus.

[11] We agree with Lilly that the claims are invalid. Contrary to UC's argument, a description of rat insulin cDNA is not a description of the broad classes of vertebrate or mammalian insulin cDNA. A written description of an invention involving a chemical genus, like a description of a chemical species, "requires a precise definition, such as by structure, formula, [or] chemical name," of the claimed subject matter sufficient to distinguish it from other materials. *Fiers*, 984 F.2d at 1171, 25 USPQ2d at 1606; *In re Smythe*, 480 F.2d 1376, 1383, 178 USPQ 279, 284-85 (Cust. & Pat.App.1973) ("In other cases, particularly but not necessarily, chemical cases, where there is unpredictability in performance of certain species or subcombinations other than those specifically enumerated, one skilled in the art may be found not to have been placed in possession of a genus....").

The cases UC cites in support of its argument do not lead to the result it seeks. These cases do not compel the conclusion that a description of a species always constitutes a description of a genus of which it is a part. These cases only establish that every species in a genus need not be described in order that a genus meet the written description requirement. *See Utter*, 845 F.2d at 998-99, 6 USPQ2d at 1714 ("A specification may, within the meaning of § 112 ¶ 1, contain a written description of a broadly claimed invention without describing all species that claim encompasses.") (affirming board's finding that an application that "describes in detail the geometry and components that make its *internal* pivot embodiment work" also sufficiently describes an interference count that is "silent as to the location of the pivot"). In addition, *Angstadt* is an enablement case and *Utter* involves machinery of limited scope bearing no relation to the complex biochemical claims before us.

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[12] In claims involving chemical materials, generic formulae usually indicate with specificity what the generic claims encompass. One skilled in the art can distinguish such a formula from others and can identify many of the species that the claims encompass. Accordingly, such a formula is normally an adequate description of the claimed genus. In claims to genetic material, however, a generic statement such as "vertebrate insulin cDNA" or "mammalian insulin cDNA," without more, is not an adequate written description of the genus because it does not distinguish the claimed genus from others, except by function. It does not specifically define any of the genes that fall within its definition. It does not define any structural features commonly possessed by members of the genus that distinguish them from others. One skilled in the art therefore cannot, as one can do with a fully described genus, visualize or recognize the identity of the members of the genus. A definition by function, as we have previously indicated, does not suffice to define the genus because it is only an indication of what the gene does, rather than what it is. *See Fiers,* 984 F.2d at 1169-71, 25 USPQ2d at 1605-06 (discussing *Amgen*). It is only a definition of a useful result rather than a definition of what achieves that result. Many such genes may achieve that result. The description requirement of the patent statute requires a description of an invention, not an indication of a result that one might achieve if one made that invention. *See In re Wilder,* 736 F.2d 1516, 1521, 222 USPQ 369, 372- 73 (Fed.Cir.1984) (affirming rejection because the specification does "little more than outlin[e] goals appellants hope the claimed invention achieves and the problems the invention will hopefully ameliorate."). Accordingly, naming a type of material generally known to exist, in the absence of knowledge as to what that material consists of, is not a description of that material.

[13] Thus, as we have previously held, a cDNA is not defined or described by the ***1569** mere name "cDNA," even if accompanied by the name of the protein that it encodes, but requires a kind of specificity usually achieved by means of the recitation of the sequence of nucleotides that make up the cDNA. *See Fiers,* 984 F.2d at 1171, 25 USPQ2d at 1606. A description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus or of a recitation of structural features common to the members of the genus, which features constitute a substantial portion of the genus. [FN4] This is analogous to enablement of a genus under § 112, ¶ 1, by showing the enablement of a representative number of species within the genus. *See Angstadt,* 537 F.2d at 502-03, 190 USPQ at 218 (deciding that applicants "are *not* required to disclose *every* species encompassed by their claims even in an unpredictable art" and that the disclosure of forty working examples sufficiently described subject matter of claims directed to a generic process); *In re Robins,* 429 F.2d 452, 456-57, 166 USPQ 552, 555 (Cust. & Pat.App.1970) ("Mention of representative compounds encompassed by generic claim language clearly is not required by § 112 or any other provision of the statute. But, where no explicit description of a generic invention is to be found in the specification ... mention of representative compounds may provide an implicit description upon which to base generic claim language."); *Cf. Gosteli,* 872 F.2d at 1012, 10 USPQ2d at 1618 (determining that the disclosure of two chemical compounds within a subgenus did not describe that subgenus); *In re Grimme,* 274 F.2d 949, 952, 124 USPQ 499, 501 (Cust. & Pat.App.1960) ("[I]t has been consistently held that the naming of one member of such a group is not, in itself, a proper basis for a claim to the entire group. However, it may not be necessary to enumerate a plurality of species if a genus is sufficiently identified in an application by 'other appropriate language.' ") (citations omitted). We will not speculate in what other ways a broad genus of genetic material may be properly described, but it is clear to us, as it was to the district court, that the claimed genera of vertebrate and mammal cDNA are not described by the general language of the '525 patent's written description supported only by the specific nucleotide sequence of rat insulin.

> FN4. We note that in claims 4, 5, and 12-14 of the '740 patent, genera of DNA sequences encoding human PI or PPI are described by reference to the structure of the claimed DNA sequences rather than by reference to their function.

Accordingly, we reject UC's argument that the district court clearly erred in finding claims 1, 2, 4, 6, and 7 invalid for failure to provide an adequate written description. Because we affirm the district court's ruling that all of the claims of the '525 patent asserted against Lilly are invalid, we need not consider whether Lilly infringed those claims. *See B.F. Goodrich Co. v. Aircraft Braking Sys. Corp.,* 72 F.3d 1577, 1583, 37 USPQ2d 1314, 1319 (Fed.Cir.1996).

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2. *Enforceability*

[14] The district court also ruled the '525 patent unenforceable on the ground of inequitable conduct. The court based this ruling on its findings that UC had violated National Institutes of Health (NIH) guidelines in order to develop the patented invention as soon as possible and had falsified material in its patent application in an effort to disguise its violation. The court noted that at the time the application that became the '525 patent was filed, NIH had certified only three plasmids for use with mammalian DNA: pSC101, pCR1, and pMB9. 39 USPQ2d at 1249. It then found that UC researchers knowingly used the uncertified pBR322 plasmid to hasten their determination of the rat PI and PPI cDNA sequences, and misrepresented that they had used pMB9, a certified plasmid, in the actual examples of their patent application. The court also found that a reasonable patent examiner would have viewed this misrepresentation as material to patentability. *Id.* at 1254.

UC argues that we should reverse the district court's ruling because it is based on a misinterpretation of the applicable law on inequitable conduct. Specifically, UC argues that the district court improperly considered alleged misrepresentations made to the NIH and Congress, and failed to properly consider ***1570** whether the alleged misrepresentation in the patent application regarding the use of pMB9 was material to patentability. UC also argues that the district court clearly erred in finding that UC actually used pBR322 and then misrepresented that it used pMB9. In response, Lilly argues that under *General Electro Music Corp. v. Samick Music Corp.*, 19 F.3d 1405, 30 USPQ2d 1149 (Fed.Cir.1994), UC's misrepresentation was sufficient to support a finding of inequitable conduct, and that such a misrepresentation need not bear directly on patentability as long as that misrepresentation was made in an effort to obtain a patent more quickly than otherwise. Lilly also argues that the district court properly found that UC's alleged pattern of deceit before a variety of governmental bodies was sufficient to render the patent unenforceable under the broad doctrine of "unclean hands." *See, e.g., Keystone Driller Co. v. General Excavator Co.*, 290 U.S. 240, 54 S.Ct. 146, 78 L.Ed. 293, 19 USPQ 228 (1933).

[15][16] "A determination of inequitable conduct is committed to a district court's discretion. Accordingly, we review the district court's judgment for an abuse of discretion." *Kolmes v. World Fibers Corp.*, 107 F.3d 1534, 1541, 41 USPQ2d 1829, 1834 (Fed.Cir.1997) (citing *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 876, 9 USPQ2d 1384, 1392 (Fed.Cir.1988)). To overturn a discretionary ruling of a district court, "the appellant must establish that the ruling is based on clearly erroneous findings of fact or on a misapplication or misinterpretation of applicable law, or evidences a clear error of judgment on the part of the district court." *Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1178, 33 USPQ2d 1823, 1827 (Fed.Cir.1995).

[17] We conclude that the district court abused its discretion in holding the '525 patent to be unenforceable. An infringer asserting an inequitable conduct defense must demonstrate by clear and convincing evidence that the applicant or his attorney either failed to disclose material information or submitted false material information to the Patent and Trademark Office (PTO) and that the applicant or his attorney did so with an intent to deceive the PTO. *See Kingsdown*, 863 F.2d at 872, 9 USPQ2d at 1389. Information is material if a reasonable examiner would have considered it important to the patentability of a claim. *J.P. Stevens & Co. v. Lex Tex Ltd.*, 747 F.2d 1553, 1559, 223 USPQ 1089, 1092 (Fed.Cir.1984).

The alleged misinformation submitted to the PTO in this case consists of statements in Examples 4 and 5 of the specification that the pMB9 plasmid was used as the cloning vector for the rat cDNA when pBR322 appears to have been used. Lilly does not argue that the pMB9 plasmid was inoperable in the stated examples, only that Examples 4 and 5 should not have been stated as actual examples (even though they presumably could have been stated as constructive, *i.e.*, hypothetical, examples). Accordingly, Lilly must demonstrate that this distinction would have been considered material by a reasonable patent examiner. We conclude that it has not done so by clear and convincing evidence.

There is no reason to believe that a reasonable examiner would have made any different decision if UC had framed Examples 4 and 5 as constructive examples. *See Atlas Powder Co. v. E.I. du Pont De Nemours & Co.*, 750 F.2d 1569, 1578, 224 USPQ 409, 415 (Fed.Cir.1984) ("Even if intent could be inferred, and if the examples were constructive but not disclosed to the examiner as such, [the alleged infringer] has not shown the nondisclosure to have been material, *i.e.*, important to an examiner in allowing the patent to issue."); Manual of Patenting

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Examining Procedure (MPEP) § 707.07(*l*) (5th ed. 1993) ("The results of the tests and examples should not normally be questioned by the examiner unless there is a reasonable basis for questioning the results."); *cf.* *Consolidated Aluminum Corp. v. Foseco Int'l Ltd.*, 910 F.2d 804, 808-09, 15 USPQ2d 1481, 1484 (Fed.Cir.1990) (affirming a finding of inequitable conduct based on an applicant's intentional disclosure of a "fictitious, inoperable" example and withholding of a best mode.). Moreover, the examiner would not have made any different decision if pBR322, the plasmid the district court found was actually used, was recited in the examples, because, as the record shows, the procedures described ***1571** in Examples 4 and 5 for rat insulin cDNA worked to yield the intended results irrespective of whether pMB9 or pBR322 was used. The misidentification of the plasmid was therefore not material to patentability. Thus, no inequitable conduct occurred in the procurement of the patent.

In addition, contrary to the findings of the district court, a reasonable patent examiner would not have considered non-compliance with the NIH guidelines to be material to patentability. The district court based its finding of materiality on the theory that if the applicant had complied with the guidelines, the application might have been delayed and the applicants might not have been the first to apply for a patent on the claimed subject matter. However, such unfounded speculation is not clear and convincing evidence of materiality.

General Electro Music does not support Lilly's argument that UC's failure to have actually used pMB9 would have been material to patentability. In *General Electro Music*, we concluded that "a false statement in a petition to make special is material if, as here, it succeeds in prompting expedited consideration of the patent." 19 F.3d at 1411, 30 USPQ2d at 1154. We so concluded because, by filing a petition to make special, the applicant "requested special treatment and induced reliance on its statement that a prior art search had been conducted." *Id.* As explained above, UC's alleged mischaracterization of the pMB9 work as an actual example did not induce the examiner to act, or not to act, in reliance thereon. UC got no advantage in the patent examining process. Therefore, we conclude that the district court clearly erred in finding that the misidentification of the plasmid was material to patentability.

[18] We also reject Lilly's alternative argument that the patent is unenforceable under the doctrine of "unclean hands." This court has previously refused to afford equitable relief in that guise in the absence of proof of materiality. In *J.P. Stevens*, 747 F.2d at 1560 n. 7, 223 USPQ at 1093 n. 7, we rejected the argument that "unclean hands" could render a patent unenforceable without proof of materiality because such a "categorization is inconsistent with this court's view that materiality is a necessary ingredient of any inequitable conduct." Accordingly, there is no legal basis for the conclusion that inequitable conduct occurred in the procurement of the patent and the district court therefore abused its discretion in its conclusion that the patent was unenforceable.

C. *The '740 Patent*

1. *Infringement*

[19] The district court ruled that Lilly did not infringe claims 5-6 and 8- 10 of the '740 patent either literally or under the doctrine of equivalents, 39 USPQ2d at 1231-38, and did not infringe claims 2-3 and 13-14 of the '740 patent under the doctrine of equivalents, *id.* at 1238. After evaluating the specification and the prosecution history, and receiving extrinsic evidence, the court construed these claims to be limited to genetic constructs (*i.e.*, "plasmids" and "transfer vectors") and microorganisms from which human PI is directly expressed. Accordingly, the court found that Lilly, which does not make or use such constructs or microorganisms, but expresses a recombinant fusion protein that is later cleaved to yield human PI, did not literally infringe the asserted claims. The court further determined that Lilly did not infringe the claims under the doctrine of equivalents because claim amendments made during the prosecution of the patent application bar UC from successfully asserting that the materials Lilly uses for expressing a recombinant fusion protein are equivalent to the claims of the '740 patent.

Challenging the district court's finding of a lack of literal infringement, UC argues that the district court incorrectly interpreted the claims. Specifically, UC argues that the use of the term "comprising" in the claims indicates that a transfer vector such as that used by Lilly will infringe the claims as long as it includes the inserted cDNA encoding human PI, irrespective of the presence of other elements such as the DNA encoding the remainder of Lilly's fusion protein. Lilly responds that the district court correctly interpreted the claims in light of the prosecution history. Lilly argues that a prior art ***1572** rejection was based on the examiner's

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conclusion that the prior art taught how to make recombinant insulin as part of a fusion protein and that UC therefore obtained allowance of the claims by specifically disclaiming transfer vectors that encode fusion proteins.

[20][21][22][23] A determination of infringement requires a two- step analysis. "First, the claim must be properly construed to determine its scope and meaning. Second, the claim as properly construed must be compared to the accused device or process." *Carroll Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573, 1576, 27 USPQ2d 1836, 1839 (Fed.Cir.1993). The first step, claim construction, is a question of law which we review *de novo;* the proper construction of the claims is based upon the claim language, the specification, the prosecution history, and if necessary to aid the court's understanding of the patent, extrinsic evidence. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979-81, 34 USPQ2d 1321, 1329-31 (Fed.Cir.1995) (in banc), *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577, 38 USPQ2d 1461 (1996). The second step, determining whether a particular device infringes a properly construed claim, is a question of fact which we review for clear error on appeal from a bench trial. *See* Fed.R.Civ.P. 52(a); *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1569, 219 USPQ 1137, 1140 (Fed.Cir.1983). In order to prove infringement, a patentee must show that "the accused device includes every limitation of the [asserted] claim or an equivalent of each limitation." *Dolly, Inc. v. Spalding & Evenflo Cos.*, 16 F.3d 394, 397, 29 USPQ2d 1767, 1769 (Fed.Cir.1994).

We agree with Lilly that UC surrendered coverage of DNA that encodes a fusion protein. The district court correctly interpreted the asserted claims to be limited to genetic constructs and microorganisms that do not include DNA coding for a fusion protein. UC argues that the direct expression of human PI and the expression of human PI via a fusion protein are both described in the patent as part of the invention of the '740 patent, but that fact doesn't change the prosecution history which indicates that UC surrendered coverage of the latter in order to overcome prior art.

[24] This surrender is best exemplified by the prosecution history relating to the claims that ultimately issued as claims 2 and 5. These claims as originally filed were directed, with varying degrees of specificity, to a DNA transfer vector *comprising* a DNA sequence coding for human PI. The word "comprising," as UC argues and as is well-established, permits inclusion of other moieties. However, during the prosecution of the patent, the examiner rejected these claims as unpatentable based on, *inter alia,* Ullrich *et al.,* 196 Science 1313 (June 17, 1977) and Villa-Komaroff *et al.,* 75 PNAS 3727 (August 1978). [FN5] The district court, essentially repeating the statements made by the patent examiner during the prosecution of the patent, found that these references taught, [FN6] respectively, the need "to combine the genetic information for the eukaryotic insulin gene with prokaryotic regulatory sequences, to obtain expression of insulin in bacteria," and "a general method for the expression and secretion of any eukaryotic protein [such as human PI] provided another protein ... will ***1573** serve as a carrier [as part of a fusion protein], by virtue of its leader sequence." 39 USPQ2d at 1232. The examiner thus rejected the claims because he believed that the prior art taught the use of recombinant eukaryotic/procaryotic fusion proteins for the production of a eukaryotic protein, including insulin, in a recombinant bacterium.

FN5. Several other publications of record before the PTO were found by the district court to teach the use of fusion proteins in the production of human PI. *See* 39 USPQ2d at 1231 n. 12. For the sake of brevity, we do not discuss them here.

FN6. UC also appears to argue that the district court clearly erred in finding that these references taught the production of human PI via a fusion protein. This argument misses the point of the analysis of prosecution history. As the Supreme Court recently noted, the question of the correctness of the examiner's rejection is "properly addressed on direct appeal from the denial of the patent, and will not be revisited in an infringement action." *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, --- U.S. ----, ---- n. 7, 117 S.Ct. 1040, 1051 n. 7, 137 L.Ed.2d 146, 41 USPQ2d 1865, 1872-73 n. 7 (1997). In construing the claims in view of prosecution history or in deciding whether to estop a patentee from asserting a certain range of equivalents, a court may only explore "the reason (right or wrong) for the objection and the manner in which the amendment addressed and avoided the objection." *Id.* Thus, the district court properly accepted the

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examiner's arguments for the purpose of construing the claims in view of the prosecution history.

In an effort to overcome the rejection based on these references, UC first amended claim 2 to read, in pertinent part: "A DNA transfer vector comprising an inserted cDNA *having* a[DNA] sequence coding for human [PI]...." The word "having" still permitted inclusion of other moieties. When again confronted by a rejection based upon the same references and a later requirement that the word "having" be changed to "consisting essentially of," a narrower term, UC ultimately complied by amending claim 2 to its present form, *viz.*, "A DNA transfer vector comprising an inserted cDNA *consisting essentially of* a[DNA] sequence coding for human [PI]." Similarly, UC amended claim 5 to its present form, which reads, in pertinent part: "A DNA transfer vector comprising a[DNA] sequence coding for human [PI] *consisting essentially of* a plus strand having the sequence" (emphasis added). The examiner allowed these claims, noting that the required "consisting essentially of" language "excludes from the cDNA the presence of sequences other than [those coding for PI]." We agree with the district court that UC thus narrowed its claims in response to a prior art rejection to exclude the materials producing a fusion protein, as Lilly now does. UC urges us to read the examiner's statement on allowance of the claims narrowly as pertaining only to claim 2 and to exclude only DNA other than naturally-occurring human cDNA. However, that statement is not so limited; it expressly applies to claim 5 and, moreover, reflects the examiner's consistent requirement, acquiesced in by UC, that the DNA inserted in the claimed vectors code only for PI, not for a PI-containing fusion protein. [FN7]

FN7. UC's later-filed amendment pursuant to 37 C.F.R. § 1.312 (1983) ("Amendments after allowance"), in which it argued that the claims as allowed would not necessarily encompass the "trivial" oligo-dC and oligo-dG ends actually used to construct the plasmid of the '740 patent, also supports this broader reading of the examiner's statement.

We have considered all of the other arguments made by UC, including its assertion that the examiner's rejections were based on a distinction between tailored and non-tailored cDNA, but find them to be unpersuasive. In light of the prosecution history, we agree with the district court that claims 5 and 6, which contain the language added during prosecution, cannot be construed to literally cover Lilly's expression of human PI via a fusion protein. Furthermore, UC has stated in its appeal brief that, for purposes of the analysis of literal infringement, the scope of claims 8-10 is no broader than that of claims 5 and 6, and that it does not appeal the court's finding with respect to claims 8-10. Accordingly, we affirm the district court's construction of claims 5-6 and 8-10; its factual finding that Lilly does not literally infringe claims 5-6 is not clearly erroneous and is therefore also affirmed.

Regarding the district court's application of the doctrine of equivalents, UC argues that the district court improperly interpreted the prosecution history to indicate that UC had disclaimed vectors encoding fusion proteins instead of to indicate, as properly interpreted, that the claims were limited to "tailored" cDNA inserts. However, as indicated above, we find no error in the district court's interpretation of the claims and the prosecution history and hence its conclusion that Lilly does not infringe the asserted claims under the doctrine of equivalents.

[25][26] When a claim has been narrowed by amendment for a "substantial reason related to patentability," such as to avoid a prior art rejection, the patentee may not assert that the surrendered subject matter is within the range of equivalents. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, --- U.S. ----, ---- - ----, 117 S.Ct. 1040, 1049-51, 137 L.Ed.2d 146, 41 USPQ2d 1865, 1871-73 (1997); *Insituform Techs., Inc. v. Cat Contracting, Inc.*, 99 F.3d 1098, 1107, 40 USPQ2d 1602, 1609 (Fed.Cir.1996), *cert. denied*, 520 U.S. 1198, 117 S.Ct. 1555, 137 L.Ed.2d 703 (1997); ("Prosecution history estoppel ***1574** bars the patentee from recapturing subject matter that was surrendered by the patentee during prosecution in order to promote allowance of the claims."). "The application of prosecution history estoppel is a question of law subject to *de novo* review." *Id.*; *see also Warner-Jenkinson*, --- U.S. at ---- - ----, 117 S.Ct. at 1049-51, 137 L.Ed.2d 146, 41 USPQ2d at 1871-73.

As the district court properly concluded, the above-described prosecution history estops UC's '740 patent from dominating Lilly's expression of its fusion protein. As a matter of law, the material used by Lilly for expressing its fusion protein is not equivalent to that of the above-analyzed claims, or to the materials of the other asserted claims, *i.e.*, claims

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2-3 and 13-14, for such an application of the doctrine of equivalents would allow UC to recapture subject matter it surrendered during the prosecution of the '740 patent. Accordingly, UC cannot meet its burden of establishing infringement under the doctrine of equivalents. The district court did not clearly err in determining that Lilly did not infringe the '740 patent, either literally or under the doctrine of equivalents.

2. *Enforceability*

[27] The district court ruled that the '740 patent was unenforceable for inequitable conduct. 39 USPQ2d at 1255-58. The court based this ruling in part on its finding that UC failed to disclose to the PTO a highly-material reference, European Patent Application No. 1929 (EPA-1929), entitled "Plasmid for Transforming Bacterial Host to Render It Capable of Polypeptide Expression" in which the expression of human somatostatin and insulin are used as examples. [FN8] The court also based its ruling on its finding that UC was made aware of the materiality of EPA-1929 when it was cited as prior art by the European Patent Office (EPO) during the prosecution of the European counterpart of the application that led to the '740 patent. The court found that under these facts, it would "draw an inference of intent to mislead," *id.* at 1257, and accordingly, found that UC had engaged in inequitable conduct.

> FN8. This application was filed by Genentech, Inc. and named Drs. Itakura and Riggs as inventors.

UC argues that it did not have a duty to disclose EPA-1929 to the PTO because it was merely cumulative of the references it had submitted to the PTO. Specifically, UC argues that EPA-1929 was cumulative of the two references on which EPA-1929 was based, which were already before the examiner when UC became aware of EPA-1929: Goeddel *et al.*, 76 PNAS 3727 (1979) and Itakura *et al.*, 198 Science 1056 (1977). [FN9] UC also argues that the district court misapplied the law on inequitable conduct by inferring an intent to deceive when the uncited reference was merely cumulative. Lilly responds that EPA- 1929 was not cumulative because, unlike the reference before the examiner, it described a specific, enabling technique for making "tailored" DNA that would encode for a fusion protein including human PI. Lilly argues that UC's assertions of subjective good faith amount to no more than a mere denial of bad faith and accordingly that the district court properly disregarded those assertions. We agree with UC that the district court clearly erred in finding that EPA-1929 was not cumulative and, accordingly, in inferring an intent to deceive.

> FN9. Drs. Itakura and Riggs, inventors of the EPA-1929 subject matter, are noted as authors on both of these articles.

[28] As stated above, we review a district court's ruling that a patent is unenforceable for inequitable conduct under an abuse of discretion standard. *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 876, 9 USPQ2d 1384, 1392 (Fed.Cir.1988). An infringer asserting an inequitable conduct defense must prove by clear and convincing evidence that the applicant or his attorney failed to disclose material information or submitted false material information to the PTO, with an intent to deceive the PTO. *See id.* at 872, 9 USPQ2d at 1389. Information is material if a reasonable examiner would have considered it important to the patentability of a claim. *J.P. Stevens & Co. v. Lex Tex Ltd.*, 747 F.2d 1553, 1559, 223 USPQ 1089, 1092 (Fed.Cir.1984). However, even where an applicant fails to disclose an otherwise material prior art reference, that failure will ***1575** not support a finding of inequitable conduct if the reference is "simply cumulative to other references," *i.e.*, if the reference teaches no more than what a reasonable examiner would consider to be taught by the prior art already before the PTO. *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1582, 18 USPQ2d 1001, 1014 (Fed.Cir.1991).

The district court correctly found that UC knew of the materiality of EPA-1929 because the EPO considered EPA-1929 to be material to the examination of the European counterpart of the '740 patent. However, if EPA-1929 was merely cumulative of other references already before the examiner, UC's failure to cite it will not support a finding of inequitable conduct because one is justified in not submitting cumulative prior art. The record indicates that EPA-1929 was cumulative. The examiner had already noted the relevance of both the Itakura article, entitled "Expression in *Escherichia coli* of Chemically Synthesized Gene for the Hormone Somatostatin," and the Goeddel article, entitled "Expression in *Escherichia coli* of Chemically Synthesized Genes for Human Insulin." As is suggested by their respective titles and their

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dates of publication and submission, the work described in the two articles is essentially the same as that described in EPA-1929. In fact, the record indicates that the European patent examiner cited EPA-1929 against the European counterpart of the '740 patent, but cited the Goeddel article merely to demonstrate the state of the art and did not cite the Itakura article at all.

Lilly argues that these articles are distinguishable from EPA-1929 based on the fact that EPA-1929 also includes a claim (claim 6) directed, in part, to a plasmid encoding human proinsulin. But the inclusion of a claim is not controlling in a determination whether EPA-1929 is cumulative. What is relevant is whether EPA-1929 discloses subject matter relevant to the examination of the '740 patent application that is not taught by the Goeddel and Itakura articles. Plainly it does not. The Goeddel article and EPA-1929 *describe* in similar detail the same experiments which led to the production of a recombinant human insulin/<<beta>>-galactosidase fusion protein. That Genentech attempted to claim a plasmid encoding human proinsulin in EPA-1929 does not add to its disclosure compared with the Goeddel article. We therefore conclude that the district court clearly erred in finding that EPA- 1929 was not cumulative.

Because we conclude that the district court's finding of materiality was clearly erroneous, we also necessarily conclude that the district court clearly erred in inferring deceptive intent from the mere fact that UC did not cite EPA-1929. UC's failure to disclose the EPA-1929 reference, given its cumulative nature, is not clear and convincing evidence of inequitable conduct. Because the district court's conclusion that the '740 patent is unenforceable for inequitable conduct is based on clearly erroneous findings of materiality and intent, that conclusion is reversed.

CONCLUSION

The district court properly exercised jurisdiction over this case and did not abuse its discretion in transferring the case to itself for a trial on the merits. It did not clearly err in finding that the '525 patent does not provide an adequate written description of the subject matter of the asserted claims and thus properly held that those claims are invalid, nor did it clearly err in finding that Lilly did not infringe the asserted claims of the '740 patent. The court abused its discretion in holding that the '525 and '740 patents are unenforceable. Accordingly, the decision of the district court is

AFFIRMED-IN-PART and *REVERSED-IN-PART.*

COSTS

Costs to Lilly.

119 F.3d 1559, 43 U.S.P.Q.2d 1398

END OF DOCUMENT

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560 F.2d 424
194 U.S.P.Q. 513
(Cite as: 560 F.2d 424)

United States Court of Customs and Patent Appeals.

Paul Herman SQUIRES, Appellant,
v.
Herbert O. CORBETT, Appellee.

Patent Appeal No. 76-693.

Aug. 4, 1977.

A decision of the Patent and Trademark Office Board of Patent Interferences awarded priority of invention as to the single count in interference No. 98,315 to the senior party. The junior party appealed. The Court of Customs and Patent Appeals, Rich, J., held that: (1) the semantically appropriate statement of inquiry is whether a party has right to make claim presently pending in his application which Commissioner of Patents has determined to be both patentable and drawn to substantially same invention as patent claim, and analysis should not be couched in terms of one's "right to make the count"; (2) questions of patent claim breadth are in fact questions of enablement arising under first paragraph of statute stating requirements for specification, and continued bifurcation of the two in interference practice is manifestly unsound; (3) for applicant to have right to copy patent claim, he must have support for full scope of the claim; right to make claim in pending application, even for purposes of interference, depends, as with all pending claims, on compliance with such statutory specification requirements, and there is no other standard, and (4) the senior party's disclosure, read in light of generic statement of the invention, a method of extruding laminated film, fairly comprehended variations of the sheet-forming process, and priority was properly granted to him.

Affirmed.

West Headnotes

[1] Patents k106(1)
291k106(1)

Decision of board of appeals reversing rejection of copied claim in ex parte prosecution was not binding on board of patent interferences.

[2] Patents k106(3)
291k106(3)

As to nongeneric limitations of copied claim for process for extrusion of multiple-layered sheeting of thermoplastic resin, record showing that such nongeneric limitations simply broadly described unitary features of junior party's process and described equally well the analogous, albeit specifically different, method steps disclosed by senior party sustained conclusion of board of patent interferences that each limitation was supported by senior party's disclosure, and board's conclusions with respect to such nongeneric limitations were summarily affirmed. Patent Office Practice Rules, rules 231, 231(d), 35 U.S.C.A. App.; 35 U.S.C.A. §§ 112, 120.

[3] Patents k106(1)
291k106(1)

[3] Patents k106(2)
291k106(2)

As prerequisite to declaration of interference under statute and regulation, commissioner of patents must decide that "application claim," whether or not identical to "patent claim," is both patentable and drawn to substantially same invention as "patent claim"; the "count" on other hand, is merely vehicle for contesting priority which, in opinion of commissioner, effectively circumscribes interfering subject matter, thereby determining what evidence will be regarded as relevant on issue of priority. 35 U.S.C.A. § 135(a); Patent Office Practice Rules, rules 201(a), 205(a), 35 U.S.C.A. App.

[4] Patents k106(2)
291k106(2)

The "count" as distinguished from party's "patent claim," need not be patentable to either party in sense of being fully supported by either party's disclosure, and where interference is conducted on "phantom" count, as described in manual of patent examining procedure or on basis of modified patent claim in accordance with regulation, at least one party, by definition, will not have full support for all limitations of count. 35 U.S.C.A. §§ 112, 135(a).

[5] Patents k106(2)
291k106(2)

Semantically appropriate statement of inquiry in patent interference proceeding is whether party has right to make claim presently pending in his application which commissioner of patents has determined to be both patentable and drawn to substantially same invention as patent claim, and analysis should not be couched in terms of one's "right to make the count." 35 U.S.C.A. § 135(a); Patent Office Practice Rules, rules 201(a), 205(a), 35 U.S.C.A. App.

[6] Patents k101(9)
291k101(9)

Questions of patent claim breadth are in fact questions of enablement arising under first paragraph of statute stating requirements for specification, and continued bifurcation of the two in interference practice is manifestly unsound. 35 U.S.C.A. § 112.

[7] Patents k106(1)
291k106(1)

Existence of common subject matter defined by interference count is prerequisite for award of priority, i. e., existence or nonexistence of interfering subject matter goes to very foundation on which interference rests. 35 U.S.C.A. §§ 112, 135(a); Patent Office Practice Rules, rule 231(a)(1), 35 U.S.C.A. App.

[8] Patents k90(1)
291k90(1)

For applicant to have right to copy patent claim, he must have support for full scope of the claim; right to make claim in pending application, even for purposes of interference, depends, as it does with all pending claims, on compliance with requirements of first paragraph of statute stating requirements of specification, and there is no other standard. 35 U.S.C.A. § 112.

[9] Patents k99
291k99

In determination of scope of his enabling disclosure, senior party was entitled to have his specification considered as whole, including generic statement of his invention. 35 U.S.C.A. § 112.

[10] Patents k90(1)
291k90(1)

Senior party's disclosure, read in light of generic statement of invention, a method of extruding laminated film, fairly comprehended variations of sheet- forming process, and priority of invention as to single count in interference was properly granted to him. 35 U.S.C.A. §§ 112, 120, 135(a).

Patents k328(2)
291k328(2)

3,476,627. Cited.

***426** Richard L. Schwaab, Bacon & Thomas, Arlington, Va., attorneys of record, for appellant.

Stephen D. Murphy, Scully, Scott, Murphy & Presser, Garden City, N. Y., attorneys of record, for appellee.

Before MARKEY, Chief Judge, RICH, BALDWIN and MILLER, Judges, and FREDERICK LANDIS, Associate Judge, United States Customs Court.

RICH, Judge.

This appeal is from the March 16, 1976 decision of the Patent and Trademark Office (PTO) Board of Patent Interferences (board) awarding priority of invention as to the single count in interference No. 98,315 to senior party Corbett. We affirm.

Corbett is involved on application Serial No. 654,941, entitled "Method of Extruding Laminated Film," filed May 26, 1967, as a division of application serial No. 350,220, filed March 9, 1964, the latter hereinafter called the "parent application." These two applications have identical disclosures. Junior party Squires is involved on U. S. Patent No. 3,476,627, issued November 4, 1969, on application serial No. 542,066, filed April 12, 1966, entitled "Process for Coextruding Multiple-Layered Thermoplastic Sheeting." Both parties took testimony.

The Issue

Squires' patent claim 1 was copied exactly into Corbett's application and is the sole count in interference. It reads (emphasis ours):

1. A process for the extrusion of multiple-layered sheeting of thermoplastic resin, said process comprising the steps of

(a) joining in a tube, at least two laminar-flow

streams of molten thermoplastic resin into a combined stream of molten thermoplastic resin which has a sharply defined juncture between the components of the combined stream,
(b) passing said combined stream of molten thermoplastic resin into a manifold of a sheeting extrusion die the juncture plane(s) between each of the individual molten thermoplastic resin components within the manifold being parallel to the principal direction of flow of the resin as it passes from the manifold and takes on the shape of sheeting, and
(c) whereby a multiple-layered sheeting wherein the individual layers of thermoplastic resin are of substantially uniform thickness over substantially all of the width of the sheeting is formed.

***427** Squires concedes that Corbett was the first inventor of the subject matter described in the Corbett application but contends, in essence, that the invention so described is not the invention defined by Squires' patent claim 1. The issue was raised below by Squires' motion to dissolve under 37 CFR 1.231 [FN1] alleging that since Corbett did not disclose the invention defined by the copied claim, Corbett had no "right to make" the copied claim. The motion was denied at final hearing, hence this appeal from the board's disposition of that ancillary issue.

FN1. 37 CFR 1.231 reads, in pertinent part:
s 1.231 Motions before the primary examiner.
(a) Within the period set in the notice of interference for filing motions any party to an interference may file a motion seeking:
(1) To dissolve as to one or more counts, except that such motion based on facts sought to be established by affidavits, declarations or evidence outside of official records and printed publications will not normally be considered, and when one of the parties to the interference is a patentee, no motion to dissolve on the ground that the subject matter of the count is unpatentable to all parties or is unpatentable to the patentee will be considered, except that a motion to dissolve as to the patentee may be brought which is limited to such matters as may be considered at final hearing (s 1.258). Where a motion to dissolve is based on prior art, service on opposing parties must include copies of such prior art. A motion to dissolve on the ground that there is no interference in fact will not be considered unless the interference involves a design or plant patent or application or unless it relates to a count which differs from the corresponding claim of an involved patent or of one or more of the involved applications as provided in ss 1.203(a) and 1.205(a).

The Disclosures

The Squires patent discloses extrusion processes for forming multiple-layer thermoplastic "sheeting" [FN2] such as that used as an interlayer in safety glass laminates. The process entails joining at least two streams of plastic extrudate in the inlet pipe upstream from the manifold of a sheeting die. As shown below in Fig. 1, two streams, 2 and 3, from extruders 1 and 1', are joined in a Y-shaped tube entering sheeting die 5. Squires requires the flow of the streams, where joined, to be laminar, that is, non-turbulent, so as to form a sharply defined juncture 4 between the layers. Fig. 1 is a schematic of the apparatus as seen from below. Fig. 2 shows the laminar sheet being extruded downwardly through lips 6. That two layers of non-uniform thickness (semi-circular in cross section) could be fed to a sheeting die and still produce a product of uniform layer thickness, as shown in Fig. 2, is alleged by Squires to have been unexpected.

FN2. The term "sheeting," as used by Squires, means a product with an overall thickness of at least five mils as extruded.

SQUIRES

Image 1 (4□ X 2.25□) Available for Offline Print

Corbett discloses extrusion processes for making laminar "films," particularly thin films less than 10 mils thick which he distinguishes from "sheets." Such films may be used, for example, in packaging applications. In the extrusion process, streams of plastic extrudate are joined and laterally expanded, as in a fan-shaped die, prior to discharge. Like Squires, Corbett recognizes that the streams must be joined while in laminar flow to avoid mixing. Two basic ***428** embodiments are disclosed, the first involving joining two or more streams in a die having a tubular orifice formed between an internal mandrel and the die body so as to produce a tubular product. In the second embodiment, three or more streams are joined in a flat sheet extrusion apparatus. At the beginning of the Corbett specification, however, the invention is generically described as follows (emphasis ours):

This invention relates to * * * the production of laminated products wherein two or more overlying and coextensive fluid films are formed with laminar

flow * * *. By laminar flow is meant the flow of two or more adjacent streams without turbulence so there is no mixing of the materials of the streams.

Corbett seems to rely on the disclosure of the sheet-forming embodiment to support the limitations of the copied claim.

In the flat sheet extrusion embodiment illustrated in Fig. 4, below, the outputs from two extruders are joined upstream from die lips 52 and 53. The extrudate from a first extruder 57 is split in "diverter plate" 62 into two streams which flow through channels 63a and 63b. These two streams are joined with the extrudate of a second extruder (not shown) which forms a centrally disposed layer when introduced through orifice 66 via channel 65 in diverter element (64) carried in plate 62. Joinder occurs in the passageway 51a in element 51. Additional layers may be added through additional orifices in the wall of passageway 51a, and the thickness of the layers may be varied by laterally varying the width and the location of the diverter and the size of orifice 66. As shown in Fig. 10, an enlarged fragmentary section of product, the illustrated sheet-extruding embodiment forms a three-layer structure. (The actual thickness of the composite film in Fig. 10 is stated to be 5 to 12 mils.)

*429 CORBETT

Image 2 (5□ X 3.5□) Available for Offline Print

Background

When Corbett first copied Squires' patent claim 1 during ex parte prosecution, the examiner, believing that the Corbett disclosure did not support the claim in a number of respects, rejected the copied claim under 35 U.S.C. s 112, first paragraph.[FN3] The Board of Appeals reversed this rejection relying, at least in part, on the disclosure of the tubular extrusion embodiment to support various limitations in the copied claim. This interference was declared and, during the motions period, Squires made the aforementioned motion to dissolve.

FN3. This statute reads:
s 112. Specification
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The substance of Squires' attack on Corbett's right to make the copied claim may be summarized as follows:

(1) Squires' claim 1 cannot be construed so broadly that it reads on Corbett's film extrusion process because the claim would then be anticipated by a reference patent over which the claim was allowed; [FN4]

FN4. Breidt, Jr., et al., U. S. Patent No. 3,399,105 issued August 27, 1968, is said to disclose a complex die-within-a-die multiple-layer extrusion process and was cited against Squires in ex parte prosecution. Squires contends that the rejection was overcome by the argument that "joining in a tube" (step (a)) requires joining outside the die.

*430 (2) Corbett does not disclose the formation of thick "sheeting," more particularly, sheeting in excess of 10 mils in thickness;

(3) Corbett discloses joining the streams within a rectangular die body rather than "joining in a tube" outside the die; and

(4) Corbett does not disclose joining two laminar flow streams but, instead, discloses joining three or more streams.

Squires additionally alleged, as part of his motion, that an incident of these deficiencies in Corbett's disclosure was to preclude Corbett's reliance on his parent application for an earlier effective filing date.

[1] Decision on the motion was deferred until final hearing, as provided by 37 CFR 1.231(d),[FN5] in view of the Board of Appeals decision, although the Board of Patent Interferences was not bound thereby. Sze v. Bloch, 458 F.2d 137, 59 CCPA 983, 173 USPQ 498 (1972).

FN5. 37 CFR 1.231(d) reads:
s 1.231 Motions before the primary examiner.
(d) All proper motions as specified in paragraph (a) of this section, or of a similar character, will be transmitted to and

considered by the primary examiner without oral argument, except that consideration of a motion to dissolve will be deferred to final hearing before a Board of Patent Interferences where the motion urges unpatentability of a count to one or more parties which would be reviewable at final hearing under s 1.258(a) and such unpatentability is urged against a patentee or has been ruled upon by the Board of Appeals or by a court in ex parte proceedings. Also consideration of a motion to add or remove the names of one or more inventors may be deferred to final hearing if such motion is filed after the times for taking testimony have been set. Requests for reconsideration will not be entertained.

The Board Opinion

The board treated Squires' motion as (1) a motion to dissolve based on Corbett's alleged failure to support the limitations of the copied claim in the instant application, and (2) a motion to deny Corbett the benefit of his parent application filing date based on the alleged absence from the parent of 35 U.S.C. s 112, first paragraph, support for the limitations of the copied claim as required by 35 U.S.C. s 120.[FN6] The board noted that the parent and the application at bar are "substantially identical" and concluded that both motions turn on "whether Corbett discloses a species falling within the generic invention defined by the count." The board continued, saying:

> FN6. That statute reads:
> s 120. Benefit of earlier filing date in the United States
> An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States by the same inventor shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

> A constructive reduction to practice of a species falling within a generic count constitutes a constructive reduction to practice of the generic invention. Den Beste v. Martin, 252 F.2d 302, 45 C.C.P.A. 798, 116 U.S.P.Q. 584 (1958). Our decision with respect to sufficiency of disclosure will apply equally to a motion for benefit of the parent as to a motion to dissolve as to the divisional.

The board found the copied claim to be unambiguous and, therefore, refused to construe its terms in light of Squires' specification, its prosecution history, or the references cited therein. While recognizing Corbett's primary concern with the formation of thin "film," the board held that Corbett's disclosed use of a "sheet extruding die" and Corbett's reference to the lamination of a number of films into a "single sheet" constituted a disclosure of "sheeting," thereby supporting the claim preamble. It was also noted that the definition of "sheeting" in the Squires patent overlapped the definition ***431** of "film" in the Corbett application and that Squires was, therefore, "estopped from urging a narrower meaning of the term."

Corbett was found to disclose "joining in a tube," as required by clause (a) of the count, in that the area below diverter element 64 formed by diverter plate 62 and die neck 51, although not of circular cross section, functions and may be described as a "tube." The copied claim, broadly construed, was not regarded as precluding the "tube" from being part of the die. Finally, the board held the disclosure of joining three streams to be a species within the genus of joining at least two streams and, therefore, found the copied claim to be supported by the Corbett disclosure in the manner sanctioned by Den Beste v. Martin, 252 F.2d 302, 45 C.C.P.A. 798, 116 U.S.P.Q. 584 (1958). In summary, the board analyzed the count element by element and found each limitation to be supported by Corbett's disclosure. Squires' motion to dissolve was, therefore, denied, and the board awarded priority to Corbett on the merits of the priority proofs, as to which there is no dispute.

The Arguments

Squires assigns as error only the board's disposition of the ancillary "right to make" issue and continues to urge the substance of his motion to dissolve. In addition, Squires contends that for a party to have a "right to make" a claim for purposes of interference, that party's disclosure must provide the support required by 35 U.S.C. s 112, first paragraph, for the full scope of the copied claim. Reliance is had, in this regard, on the following statement in the majority opinion in Hunt v. Treppschuh, 523 F.2d 1386, 1389,

187 U.S.P.Q. 426, 429 (Cust. & Pat. App. 1975):

> Another distinction is that Hunt's parent application is relied upon as a prior constructive reduction to practice; whereas in Smith v. Horne, 450 F.2d 1401, 59 C.C.P.A. 712 (1971) the disclosure was relied upon for a right to make the count. In the latter situation the requirements of the first paragraph of 35 U.S.C. s 112 must be satisfied for the full scope of the count. In the former, however, the s 112, first paragraph requirements need only be met for an embodiment within the count. (Emphasis in the original.)

The validity of the Den Beste reasoning, relied on by the board, is, thus, directly attacked as being founded on concepts which, appellant argues, should properly be restricted to constructive reduction to practice issues. Squires attempts to sharpen this distinction by pointing to an apparent conflict between the Den Beste right-to-make standard and the full enablement requirement of 35 U.S.C. s 120 applicable when a party relies on a parent application filing date.

Corbett, for the most part, embraces the board's opinion. It is alleged that Squires' patent claim 1 is simply broad and reads unambiguously on Corbett's disclosure. The board's reliance on Den Beste is said to rest on sound public policy and well-settled law, while any statements in Hunt to the contrary are alleged to be dicta. Any conflict between Den Beste and 35 U.S.C. s 120 is dismissed as either semantic or as understandable on policy grounds favoring removal of invalid patent claims. Notwithstanding Corbett's professed reliance on Den Beste, there are vague allegations that the copied claim is fully supported by the Corbett disclosure even under the Hunt standard.

OPINION

[2] While we are in general agreement with the board's disposition of the issues before it, we disagree with the analysis employed in sustaining Corbett's right to make a claim containing the limitation "joining * * * at least two laminar-flow streams" (emphasis ours). Notwithstanding Squires' arguments to the contrary, this appears to be the only "generic" limitation in the claim, for it alone comprehends a community of mutually exclusive ***432** manipulative steps. The remaining limitations simply broadly describe unitary features of Squires' process and, as the board found, describe equally well the analogous, albeit specifically different, method steps disclosed by Corbett. Accordingly, we summarily affirm the board's conclusions with respect to these nongeneric limitations.

The flaw in the board's reasoning goes uniquely to the issue of support for generic claim limitations and is apparent from the following excerpt from its opinion:

> Another issue raised by Squires under the first paragraph of 35 USC 112 with respect to the limitations recited in paragraph (a) is that the Corbett application does not contain the disclosure of an apparatus enabling the production of a two-layered sheet. While the apparatus disclosed in Corbett's application produces a three-layered sheet, such disclosure is sufficient to satisfy the enabling requirements of the statute for priority purposes. The count defines a process for producing "at least" two sheets, which is generic to a process for producing three sheets, and disclosure of an apparatus enabling the performance of a single species process falling within a generic process count is sufficient to comply with the statutory requirements of 35 USC 112 insofar as priority of invention is concerned. Den Beste v. Martin * * *.

The board adopted the mode of analysis articulated in Den Beste wherein the court stated:

> * * * the question as to whether the disclosure of an application is broad enough to support a generic claim is one which relates only to the patentability of that count in the application, and is not ancillary to the issue of priority. So far as priority is concerned, it is sufficient if the application discloses a single species, example or embodiment which clearly meets all the requirements of the count.
>
> Appellant argues that the Board of Patent Interferences erred in failing to give effect to "the law requiring literal and exact support of all limitations of an interference count by the party to whom priority is awarded." However, the disclosure of a single species or example clearly falling within the count constitutes a support of all its limitations, so far as the issue of priority is concerned. Manifestly, if Martin reduced to practice one example satisfying the count before Den Beste entered the field, Den Beste cannot be the first inventor of a broad claim embracing that example. If Martin failed to recognize that his example formed part of a broader invention, that fact might preclude him from obtaining broad claims, but it could not constitute Den Beste the first inventor of any claim reading on the said example. (252 F.2d at 305, 45 CCPA at 802, 116 USPQ at 586, emphasis ours.)

As noted by Squires, these statements were made following reference in the opinion to a series of cases which held that the disclosure of a single species in an application was sufficient to evidence a constructive reduction to practice of the generic invention. Without impugning the result reached in Den Beste, we are persuaded that the reasoning there employed, and similarly employed by the board in this case, is unsound.

Our reasons for this conclusion are best understood by first focusing on the nature of the right-to-make inquiry in an interference between a patent and a pending application. In so doing, we find it helpful to distinguish between several terms often used inconsistently in this area. More particularly, we take care to distinguish between the "patent claim," the "application claim," and the "count." Notwithstanding the identity of the three in this case, as a general proposition they need not be the same, and, in either case, each has unique significance in an interference.

[3][4] As a prerequisite to the declaration of an interference under 35 U.S.C. ***433** s 135(a) [FN7] and 37 CFR 1.201(a),[FN8] the Commissioner must decide that the "application claim," whether or not identical to the "patent claim," is both patentable and drawn to substantially the same invention as the "patent claim." Failure of either condition precludes the possibility of interference contemplated by the statute. The "count," on the other hand, is merely the vehicle for contesting priority which, in the opinion of the Commissioner, effectively circumscribes the interfering subject matter, thereby determining what evidence will be regarded as relevant on the issue of priority. The "count," as distinguished from a party's "claim," need not be patentable to either party in the sense of being fully supported by either party's disclosure. In fact, where the interference is conducted on a "phantom" count, as described in s 1101.02 of the Manual of Patent Examining Procedure (Third Ed.), or on the basis of a modified patent claim in accordance with 37 CFR 1.205(a),[FN9] at least one party, by definition, will not have full support for all of the limitations of the count.

> FN7. s 135. Interferences
> (a) Whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be. The question of priority of invention shall be determined by a board of patent interferences (consisting of three examiners of interferences) whose decision, if adverse to the claim of an applicant, shall constitute the final refusal by the Patent and Trademark Office of the claims involved, and the Commissioner may issue a patent to the applicant who is adjudged the prior inventor. A final judgment adverse to a patentee from which no appeal or other review has been or can be taken or had shall constitute cancellation of the claims involved from the patent, and notice thereof shall be endorsed on copies of the patent thereafter distributed by the Patent and Trademark Office.
>
> FN8. s 1.201. Definition, when declared.
> (a) An interference is a proceeding instituted for the purpose of determining the question of priority of invention between two or more parties claiming substantially the same patentable invention and may be instituted as soon as it is determined that common patentable subject matter is claimed in a plurality of applications or in an application and a patent.
>
> FN9. s 1.205. Interference with a patent; copying claims from patent.
> (a) Before an interference will be declared with a patent, the applicant must present in his application, copies of all of the claims of the patent which also define his invention and such claims must be patentable in the application. However, an interference may be declared after copying the claims excluding an immaterial limitation or variation if such immaterial limitation or variation is not clearly supported in the application or if the applicant otherwise makes a satisfactory showing in justification thereof.

[5] Manifestly, it is at best confusing, and perhaps erroneous, to speak of a party's right to make the "count." The semantically appropriate statement of the inquiry is whether a party has the right to make that claim presently pending in his application which the Commissioner has determined to be both patentable and drawn to substantially the same invention as the patent claim. See, e. g., Tolle v. Starkey, 255 F.2d 935, 45 CCPA 979, 118 USPQ 292

(1958). Analyses couched in terms of one's "right to make the count" tend to suggest that the inquiry is something other than an examination of the relationship between the applicant's enabling disclosure and the limitations of a then pending claim, an examination, we might add, of the sort routinely conducted pursuant to the first paragraph of 35 U.S.C. s 112 during ex parte prosecution. Such misconceptions seem to have contributed to the confusion which others have found in the Den Beste decision.[FN10]

FN10. See Pat. L. Persp., s C.1(3) (1974 Dev.).

Viewing the right-to-make analysis as an inquiry into the support afforded a pending claim by the application's disclosure, it becomes apparent that the Den Beste reasoning was never justifiable on the basis of the constructive reduction to practice cases cited in its support. When it was implied in those cases that a single species would "support" a generic invention "so far as priority is concerned," what was meant was that proof of a prior constructive reduction to practice of a species would be enough evidence to prevail on priority even as to a generic invention. The Den Beste court ***434** erred, as did the board in this case in following it, in reading "so far as priority is concerned" as though it meant "for any and all purposes in an interference."

Den Beste, however, was as much a product of its time as it was of semantic confusion. The interference there involved was declared on August 20, 1953, and, at that time, and for sometime thereafter (notwithstanding the liberalization of the PTO rules in 1954), the right to copy a patent claim was, for all practical purposes, determinative of the right to contest priority. As a result, there was, and has continued to be, considerable sentiment on this court favoring preservation of the inter partes forum for parties who had apparently made substantially the same invention, but who could not make identical claims, by allowing the applicant to copy a claim "for interference purposes." [FN11] The desired result was conveniently achieved in Den Beste by regarding the issue of undue claim breadth as a question of patentability not ancillary to priority. In this regard, it must be remembered that at that time, in fact, until 1970, it was common practice to treat questions of enablement or support separately from questions of claim breadth, even in ex parte situations.

FN11. See Loukomsky v. Gerlich, 264 F.2d 907, 46 CCPA 805, 121 USPQ 213 (1959). See also In re Hutton, 356 F.2d 111, 115, 53 CCPA 923, 928, 148 USPQ 545, 548 (1966) (Rich, J., concurring).

[6] Today, however, it is widely recognized that questions of claim breadth are in fact questions of enablement arising under the first paragraph of 35 U.S.C. s 112, In re Borkowski, 422 F.2d 904, 57 CCPA 946, 164 USPQ 642 (1970), and the continued bifurcation of the two in interference practice is manifestly unsound. Further, it is apparent from the cases that are now reaching this court, and from the published decisions of the board, that the PTO is now liberally employing the procedures referred to above which enable an applicant to contest priority inter partes despite his inability to copy a claim. See, e. g., Aelony v. Arni, 547 F.2d 566, 192 USPQ 486 (Cust. & Pat. App. 1977); Nitz v. Ehrenreich, 537 F.2d 539, 190 USPQ 413 (Cust. & Pat. App. 1976); Moore v. McGrew, 170 USPQ 149 (Bd. Pat. Intf. 1971).

[7] Corbett, nonetheless, argues that the Den Beste reasoning is grounded in sound public policy and that the application thereof to this case to permit both parties the proofs of their earliest embodiments disables neither. We do not agree. Assuming, arguendo, that Corbett has been allowed to copy exactly Squires' patent claim with a less than adequate supporting disclosure, as is permissible under Den Beste, rather than having been required to properly copy the claim in modified form, then Squires has been unfairly precluded from raising the issue of interference in fact by the operation of 37 CFR 1.231(a) (1).[FN12] See Rion v. Ault, 455 F.2d 570, 172 USPQ 588 (Cust. & Pat. App. 1972), modified, 482 F.2d 948, 179 USPQ 152 (Cust. & Pat. App. 1973); Brailsford v. Lavet, 318 F.2d 942, 50 CCPA 1367, 138 USPQ 28 (1963). The foreclosure of this inquiry by PTO rule when the parties have made identical claims assumes that any interference in fact issues arising out of dissimilarities in the supporting disclosures of the parties will be wholly subsumed by the right-to-make inquiry. See Blackmore v. Hall, 1905 C.D. 561, 119 O.G. 2523 (Comm. Pat. 1905). Mechanical application of the Den Beste reasoning, however, frustrates the only remaining inquiry into the materiality of any limitation not fully supported by the copier's disclosure, thus foreclosing the only inter partes procedure capable of verifying the existence of interfering subject matter. As we noted in Nitz v. Ehrenreich, supra :

FN12. See note 1, supra.

The existence of common subject matter defined by

the interference count is a prerequisite for an award of priority, i. e., the existence or nonexistence of interfering subject matter goes to the very foundation on which an interference rests. (537 F.2d at 543, 190 USPQ at 416.)

***435** Since we cannot condone the continued frustration of the patentee's right to raise such an issue once it has been established that the patent claim was improperly copied, we are constrained to now reject the Den Beste reasoning.

[8] We conclude that for an applicant to have a right to copy a patent claim he must have support for the full scope of the claim. See Hunt v. Treppschuh, supra at 1389, 187 USPQ at 429. This conclusion rests on the recognition that the right to make a claim in a pending application, even for purposes of interference, depends, as it does with all pending claims, on compliance with the requirements of 35 U.S.C. s 112, first paragraph. There is no other standard. To the extent that Den Beste and its progeny are inconsistent with our conclusion, the reasoning of those cases should no longer be followed. [FN13]

> FN13. A number of our decisions have purported to employ the Den Beste analysis. E. g., Loukomsky v. Gerlich, supra. Still other cases, while not relying on Den Beste, sanctioned similar analyses. E. g., Hall v. Taylor, 332 F.2d 844, 51 CCPA 1420, 141 USPQ 821 (1964). See also, In re Waymouth, 486 F.2d 1058, 179 USPQ 627 (Cust. & Pat. App. 1973), modified, 489 F.2d 1297, 180 USPQ 453 (Cust. & Pat. App. 1974). It is believed that our decision today does not affect the ultimate conclusions reached in any of those cases, but to here attempt to prove our belief would be a fruitless exercise. Suffice it to say that our opinion should be read as the adoption of a more satisfactory methodology which encourages the use of PTO procedures under which controversies of this type are more likely to be dealt with as interference in fact inquiries, as befits their true nature.

[9] Our review of the board's decision cannot end simply with a rejection of its reasoning. Hunt v. Treppschuh, supra. We must proceed to a determination of whether or not Corbett's disclosure supports the generic claim limitation, "joining * * * at least two laminar-flow streams," in the manner required by the first paragraph of s 112. We conclude that it does.

Although there is clearly no specific exemplary support for sheet-forming processes which join only two streams, such is not required by s 112. In re Gay, 309 F.2d 769, 50 CCPA 725, 135 USPQ 311 (1962). Rather, in a determination of the scope of his enabling disclosure, Corbett is entitled to have his specification considered as a whole, including the above-quoted generic statement of his invention. In re Anderson, 471 F.2d 1237, 176 USPQ 331 (Cust. & Pat. App. 1973). The generic statement of the invention is not restricted to the tubular extrusion embodiment and, therefore, manifests an intention that the invention not be limited, as far as sheets are concerned, to the exemplified three-stream process.

[10] Corbett recognizes that the joinder of at least two streams under laminar flow conditions allows subsequent deformation and extrusion thereof without disruption of the layer structure in the final product. While the use of diverter element (64) in the manner exemplified would produce a three-layer sheet structure, it is apparent that simple obstruction of the diverter orifice 65, or some equivalent interruption of the resin feed thereto, would result in the reunion of the two portions of the split stream under the conditions recited in the copied claim. We believe Corbett's contemplation of multi-layer products formed from the same resin supports the conclusion that such variations of the sheet-forming process are comprehended by the Corbett disclosure. See In re Farrow, 554 F.2d 468, 193 USPQ 689 (Cust. & Pat. App. 1977).

In the alternative, Corbett clearly contemplates the joinder of additional layers through orifices on the "tube" (passageway 51) wall. Such an added stream is joined with the main stream in the manner contemplated by the copied claim and through a mechanism that is totally independent of the operation of diverter element (64). In our opinion, such a disclosure, when read in light of the generic statement of the invention, fairly comprehends sheet-forming processes wherein the diverter is removed entirely with one or more additional layers being introduced through orifices on the tube wall. Our conclusion is reinforced by Corbett's reference to the ease of modifying standard lines "by the simple addition of a suitable plate 62."

***436** In summary, we agree with the decision of the board that both Squires' motion to dissolve and the perceived motion to deny Corbett the benefit of his parent filing date, turning, as they do, on the same

issue, should be denied. The issue upon which both motions turn, however, is s 112, first paragraph, support in the Corbett disclosure for the full scope of the copied claim. We are persuaded that the requisite support exists.

The decision of the board is affirmed.

AFFIRMED.

560 F.2d 424, 194 U.S.P.Q. 513

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572 F.2d 856
196 U.S.P.Q. 600
(Cite as: 572 F.2d 856)

United States Court of Customs and Patent Appeals.

Edward D. WEIL, Appellant,
v.
Charles D. FRITZ, Wilbur F. Evans and Anson R. Cooke, Appellees.

Appeal No. 77-557.

Jan. 26, 1978.

Patent interference proceeding was brought. The Board of Patent Interferences of United States Patent and Trademark Office, Interference No. 97,772, awarded priority of invention to senior party, and junior party appealed. The Court of Customs and Patent Appeals, Baldwin, J., held that: (1) conversion declaration stating that second application was a continuation-in-part of prior application and amending the inventive entity to three applicants was not fatally defective for priority purposes merely because initial application was filed by two applicants and was not amended in fact; (2) failure of oath or declaration of second application to aver that subject matter common to prior and subsequent applications was not barred by any activity within one year prior to filing date of the second application was not fatal, and (3) where a subsequent application seeks to avail itself of filing date of a prior application, the best mode disclosure requirement is ancillary to priority and, hence, within jurisdiction of Board of Patent Interferences.

Reversed and remanded for further proceedings.

West Headnotes

[1] Patents k90(1)
291k90(1)

Conversion declaration, which was filed in second patent application, which stated that the second application was a continuation-in-part of first application and which amended the inventive entity to three applicants, was not fatally defective merely because the first application was filed by two applicants and was never amended in fact; conversion application was legally equivalent to an amendment, notwithstanding that it was filed after abandonment date of the original application. 35 U.S.C.A. §§ 116, 120.

[2] Patents k90(1)
291k90(1)

For interference purposes, subsequent patent application was entitled to benefit of filing date of earlier, abandoned application, notwithstanding that oath or declaration of the subsequently filed declaration did not aver that subject matter common to both applications was not barred by any activity more than one year prior to filing date of the later application. 35 U.S.C.A. §§ 112, 115, 120.

[3] Patents k120
291k120

Fact that initial patent application indicated that subject matter was invented by two individuals did not constitute prior art, notwithstanding that subsequent application was amended to claim inventorship by the two original applicants plus a third individual; any disclosure of the invention in the original application would have been a disclosure of the three applicants' own invention. 35 U.S.C.A. § 102(g).

[4] Patents k90(1)
291k90(1)

Where a subsequent application is sought to be accorded filing date of a prior application, requirement that patent specification set forth the best mode contemplated by the inventor of carrying out his invention need only be met for an embodiment within the count in the special situation where the count is drawn to a genus and the previously filed application discloses only a species thereof. 35 U.S.C.A. §§ 112, 120.

[5] Patents k90(1)
291k90(1)

Where a subsequent patent application is sought to be accorded the filing date of a prior application, the best mode disclosure requirement is ancillary to priority and, hence, within jurisdiction of Board of Patent Interferences; overruling *Thompson v. Dunn,*

166 F.2d 443, 35 CCPA 957, 77 USPQ 49 and *Mahan v. Doumani,* 333 F.2d 896, 51 CCPA 1516, 142 USPQ 19. 35 U.S.C.A. §§ 112, 120.

***857** Daniel C. Block, Richmond, Cal., Edward D. Weil, attorneys of record, for appellant, Jerry D. Voight, Herbert H. Mintz, Finnegan, Henderson, Farabow & Garrett, Washington, D. C., of counsel.

Alan H. Bernstein, Stanley H. Cohen, Caesar, Rivise, Bernstein & Cohen, Ltd., Philadelphia, Pa., attys. of record, for appellees.

Before MARKEY, Chief Judge, and RICH, BALDWIN, LANE and MILLER, Judges.

***858** BALDWIN, Judge.

This is an appeal by Weil, [FN1] the junior party, from the decision of the Patent and Trademark Office Board of Patent Interferences (board) which awarded priority of invention to Fritz et al. (Fritz), [FN2] ruling that Fritz was entitled to the benefit of an earlier application with a filing date before the earliest date asserted by Weil, his filing date. We reverse and remand.

FN1. Application Serial No. 826,653, filed May 21, 1969, for '2-Chloroethylphosphonic Acid as a Plant Growth Regulator.' The real party in interest is Stauffer Chemical Company.

FN2. Application Serial No. 221,803, filed January 28, 1972, for 'Method for the Inhibition of Plant Growth' (hereafter Fritz IV). Fritz's earlier applications are described in the text, infra. The real party in interest is Amchem Products, Inc., a division of Union Carbide Corporation.

Background

The subject matter of the interference is defined by the sole count which reads as follows:

A method for the inhibition of plant growth which comprises applying thereto an effective amount of 2-chloroethylphosphonic acid [hereafter 2-CEPA]. [FN3]

FN3. The count is identical to claim 1 of Fritz IV and claim 11 of Weil. 2-CEPA is a prior art compound.

The chronology of applications is as follows:

Party Fritz	Party Weil
Application Serial No. 617,860 (hereafter Fritz I) filed February 23, 1967; abandoned December 1, 1969 applicants: Fritz and Evans	
Application Serial No. 693,698 (hereafter Fritz II) filed December 27, 1967; abandoned April 2, 1970 continuation-in-part of Fritz I applicants: Fritz and Evans (amendment approved March 27, 1970 adding Cooke as joint inventor	Application Serial No. 826,653 filed May 21, 1969
Application Serial No. 869,386 (hereafter Fritz III) filed October 24, 1969 continuation-in-part of Fritz II applicants: Fritz, Evans, and Cooke	
Application Serial No. 221,803 (Fritz IV) filed January 28, 1972 division of Fritz III applicants: Fritz, Evans, and Cooke	

The interference was declared on September 7, 1971, between Weil and Fritz III. In the declaration of interference, the patent interference examiner accorded Fritz III the benefit of Fritz I and II, making Weil the junior party. Fritz thereafter filed Fritz IV and moved to substitute Fritz IV for Fritz III.

Weil moved to shift the burden of proof, [FN4] i. e., to deny Fritz III the benefit of the filing dates of Fritz I and II under 37 CFR 1.231(a)(4), [FN5] on the ground that Fritz I and II 'are not consistent regarding inventorship with the later-filed application [Fritz III].'

FN4. The burden of proof is defined in 37 CFR 1.257(a):

§ 1.257 Burden of proof.
(a) The parties to an interference will be presumed to have made their inventions in the chronological order of the filing dates of their applications for patents involved in the interference or the effective filing dates which such applications have been accorded; and the burden of proof will rest upon the party who shall seek to establish a different state of facts.

FN5. § 1.231 Motions before the primary examiner.
(a) Within the period set in the notice of interference for filing motions any party to an interference may file a motion seeking:

* * *

(4) To be accorded the benefit of an earlier application or to attack the benefit of an earlier application which has been accorded to an opposing party in the notice of declaration. * * *

The primary examiner granted Fritz's motion to substitute Fritz IV, awarding that application the benefit of Fritz I, II, and III, and denied Weil's motion to shift the burden of proof, ruling that Fritz IV was entitled to the earlier dates under 35 U.S.C. § 120 [FN6] because the inventorship in ***859** Fritz II had been properly corrected under 35 U.S.C. § 116. [FN7] The primary examiner cited *In re Schmidt*, 293 F.2d 274, 48 CCPA 1140, 130 USPQ 404 (1961), as 'completely apposite here.'

FN6. § 120. Benefit of earlier filing date in the United States.
An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States by *the same inventor* shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application. [Emphasis added.]
The text of 35 U.S.C. § 112, first paragraph, is in note 8, infra.

FN7. § 116. Joint inventors.
When an invention is made by two or more persons jointly, they shall apply for patent jointly and each sign the application and make the required oath, except as otherwise provided in this title.
If a joint inventor refuses to join in an application for patent or cannot be found or reached after diligent effort, the application may be made by the other inventor on behalf of himself and the omitted inventor. The Commissioner, on proof of the pertinent facts and after such notice to the omitted inventor as he prescribes, may grant a patent to the inventor making the application, subject to the same rights which the omitted inventor would have had if he had been joined. The omitted inventor may subsequently join in the application. Whenever a person is joined in an application for patent as joint inventor through error, or *a joint inventor is not included in an application through error*, and such error arose without any deceptive intention on his part, the Commissioner may permit the application to be amended accordingly, under such terms as he prescribes. [Emphasis added.]

Weil petitioned the Commissioner to review the action of the primary examiner in refusing to shift the burden of proof. The Commissioner, denying Weil's petition, stated: 'The question of burden of proof is ancillary to priority and is reviewable at final hearing by the Board of Patent Interferences, and in the courts if desired.'

Weil petitioned this court for a writ of mandamus ordering the Commissioner to grant the motion to shift the burden of proof. We denied that petition. *Weil v. Dann*, 503 F.2d 562, 183 USPQ 300 (Cust. & Pat.App.1974).

Fritz, the senior party, then took testimony-in-chief and Weil took rebuttal testimony. After Fritz's testimony-in-chief, Weil filed a second motion to deny Fritz IV the benefit of the filing dates of Fritz I and II on the following basis:

Testimony adduced from witnesses of the party Fritz et al., during its testimony-in-chief, has revealed, for the first time in this interference, that:
1. Long prior to the filing of the earliest of the aforementioned applications, Fritz et al contemplated a preferred mode of carrying out the

method of the count;
2. The said preferred mode was the best mode contemplated by Fritz et al for carrying out the invention defined by the count; and
3. Notwithstanding the mandate of 35 U.S.C. § 112, first paragraph [FN8], Fritz et al did not disclose the best mode known to them in either of the aforementioned applications. [Footnote omitted.]

> FN8. § 112. Specification.
> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and *shall set forth the best mode contemplated by the inventor of carrying out his invention*. [Emphasis added.]

* * *

The count * * * pertains to a method of inhibiting plant growth by applying 2-chloroethylphosphonic acid [2-CEPA]. * * *
The [2-CEPA] is soluble in water and is normally applied to the plants in the form of an aqueous solution. * * *

* * *

The testimony reveals that by no later than the end of 1965, the party Fritz et al and others at Amchem regarded the 2-chloroethylphosphonic acid to be unstable and susceptible to decomposition when contained in water solution having a pH greater than about 4.5. The evidence ***860** further shows Fritz et al contemplated that the application of the acid material to plants in water solution is preferably effected under certain operating conditions to prevent or avoid the detrimental effects of such decomposition. [Footnote omitted.]
Specifically, it was contemplated by Fritz et al that solution conditions be used which would maintain the pH below about 4.5 and/or that a spray or application solution of 2-chloroethylphosphonic acid be applied to the plants promptly after formulating the spray solution, particularly if the solutions were made up with neutral or alkaline water.
Fritz et al, and others at Amchem, clearly considered the pH sensitivity of water solutions of 2-chloroethylphosphonic acid to be a significant factor in proper use of the acid in accordance with the method of the count. They determined a preferred operating condition well prior to their earliest application filing date. The testimony fully supports the contention herein, and the most exhaustive inspection of the two earliest Fritz et al applications will not locate any reference to the contemplated best mode of carrying out the method of the count. [FN7]
7 The first indication of any type in the Fritz et al applications of any sort of 2-chloroethylphosphonic acid stability problem in water solutions appears in the *third* Fritz et al application. * * * [Footnote in original.]
Failure to advise potential users of the method of the count, in either of the first two Fritz et al applications, of important preferred operating conditions, i.e., maintaining solutions of 2-chloroethylphosphonic acid at a pH of less than about 4.5 and using the solutions promptly, constitutes failure to disclose a known best mode, in contravention of the provisions of 35 U.S.C. § 112. This failure to disclose deprives Fritz et al of the right to receive the benefit of the filing dates of these applications under 35 U.S.C. § 120.

Consideration of Weil's second motion was deferred to final hearing.

The Board

The board sustained the primary examiner's denial of Weil's motion to shift the burden of proof (the first motion to deny the benefit of Fritz I and II). The board's opinion on this issue was:

> Weil, in urging that Fritz is not entitled to benefit of Fritz I or Fritz II, asserts (main brief, page 14):
> Implicit from the rationale underlying the party Weil's position advanced above are two critical factors. First, there is a difference between (i) converting, as contemplated by 35 U.S.C. § 116, the inventorship in a *single, given* application, and (ii) obtaining, under the provisions of 35 U.S.C. § 120 the benefit of the filing date of an earlier filed application where the inventorship entity has been changed in the later filed application. Second, in obtaining the benefit of an earlier filed application, there is an important difference between joining (i) too many, and (ii) too few inventors in the earlier filed case.

and concludes (reply brief, page 8):

> . . . It is apparent that under these circumstances, absent entitlement to the first application [Fritz I], Fritz et al cannot benefit from the second application [Fritz II] because of its fatally defective declaration.

We disagree. From a study of the details of pertinent cases, and comparison of them to the situation here, it is our opinion that Fritz was properly accorded at least the filing date of Fritz II as his effective filing date, which date is prior to the effective filing date of Weil.

Both parties discuss in their briefs a significant case relating to the issue of conversion: *In re Schmidt*, 48 CCPA 1140, 293 F.2d 274, 130 USPQ 404 (1961). This case holds that 35 USC 116 is 'remedial in nature and as such should be liberally construed in order that 'errors' may be readily rectified.' *Schmidt* elaborates ([48 CCPA at 1148, 293 F.2d at 279,] 130 USPQ [at] 409-10):

> ***861** It is, we believe, the correct interpretation of congressional intent that the expression 'error * * * without any deceptive intention' in section 116 was intended not only to replace the more cumbersome expression 'inadvertence, accident or mistake' previously used but was intended to relieve applicants from the narrow application of the old terms as the courts had construed them. Every indicator of legislative intent points in that direction.
>
> The term 'the same inventor' as used in section 120 does not have the literal, narrow technical meaning the solicitor would have us assign to it. It must be construed with all other relevant sections of the statute, including sections 116 and 256 and thus it embraces the possibility permitted by sections 116 and 256 that the earlier application may be corrected thereunder by changes in the name or names of the applicants under the conditions stated in section 116.
>
> We hold, therefore, that appellant was entitled under section 116 to correct the errors in the intermediate application filed in the names of joint inventors and under section 120 was entitled as 'the same inventor' to the benefits of the filing dates of the earlier co-pending applications
>
> We find nothing in the statute (35 USC 116), the decisions of our appellate tribunals or the Rules of Practice (37 CFR 1.45) which supports Weil's two basic contentions noted above. *Schmidt* makes it clear that the liberal provisions of 35 USC 116 apply equally to those conversions affecting benefit pursuant to 35 USC 120. Nor do we find authority for attaching any significance to the difference between joining 'too many' or 'too few inventors.' No reason is seen to exempt the instant case from the liberal provisions outlined in *Schmidt*. Compare, inter alia, *Patterson v. Hauck*, 52 CCPA 987, 341 F.2d 131, 144 USPQ 481 (1965); and *Ex parte Lechtenberg*, 146 USPQ 551 (Bd.App.1964). Manifest lack of diligence may provide basis for improper conversion. *Van Otteren v. Hafner*, 47 CCPA 993, 278 F.2d 738, 126 USPQ 151 (1960). However, no such lack of diligence on the part of Fritz has been alleged by Weil or is evident here.
>
> We therefore find no improper conversion on the part of Fritz which would deny him senior party status.

Next, the board considered Weil's second motion to deny the benefit of the filing dates of Fritz I and II. The board's opinion on this issue was:

> A party to an interference 'is entitled to the benefit of the filing date of a previously filed application when the requirements of 35 U.S.C. 120 are satisfied.' *Martin v. Johnson*, [59 CCPA 769,] 454 F.2d 746, 172 USPQ 391 (CCPA 1972). Compare *Kawai v. Metlesics*, 480 F.2d 880, 178 USPQ 158 (CCPA 1973). Section 120 requires that the application of whose filing date the benefit is sought discloses the invention '. . . in the manner provided by the first paragraph of section 112 of [Title 35]' and § 112, first paragraph, requires, inter alia, that '[t]he specification . . . shall set forth the best mode contemplated by the inventor of carrying out his invention.'
>
> Weil would have us look into Fritz' benefit applications to determine whether the 'best mode' requirement of § 112 has been complied with. However, the prevailing authority is that the issue of 'best mode' is not 'ancillary' to priority and, therefore, this Board cannot consider the issue. *Thompson v. Dunn*, 35 CCPA 957, 166 F.2d 443, 77 USPQ 49 (1948).* We note that Weil has not alleged that the enabling requirement of § 112, as discussed in *Martin [v. Johnson*, 59 CCPA at 775, 454 F.2d at 751] 172 USPQ [at] 395, has not been met by Fritz.
>
> * We recognize that the *Thompson* decision was based on R.S. 4888 which preceded Title 35. However, from a comparison of the two statutes, we find no reason to conclude that a different result should now follow. [Footnote in original.]
>
> Accordingly, Weil's motion * * * is dismissed as being drawn to subject matter ***862** not proper for consideration by this Board pursuant to 37 CFR 1.258. [FN9]
>
> FN9. § 1.258 Matters considered in determining priority.
>
> (a) In determining priority of invention, the Board of Patent Interferences will consider only priority of invention on the evidence submitted. Questions of patentability of a

claim generally will not be considered in the decision on priority; and neither will the patentability of a claim to an opponent be considered, unless the nonpatentability of the claim to the opponent will necessarily result in the conclusion that the party raising the question is in fact the prior inventor on the evidence before the Office, or relates to matters which have been determined to be ancillary to priority and must be considered. A party shall not be entitled to raise such nonpatentability unless he has duly presented a motion for dissolution under § 1.231 upon such ground or shows good reason (e. g., that such nonpatentability became evident as a result of evidence extrinsic to an involved application) why such a motion was not presented; however, to prevent manifest injustice the Board of Patent Interferences may in its discretion consider a matter of this character even though it was not raised by motion under § 1.231.

(b) At final hearing a party shall not be entitled to urge consideration of a matter relating to the benefit of an earlier application of his own or of another party unless he has presented such matter in connection with a motion under § 1.231(a)(4), or shows good reason why it was not so presented.

* * *

From the record before us, and within the limits of our jurisdiction, we hold that Fritz is entitled to an effective filing date no later than the filing date of Fritz II.

Thus, priority of invention was awarded to Fritz because Weil stood on his filing date which was later than that of Fritz II.

Reconsideration was denied, but the board commented on Weil's request for reconsideration as follows:

We in no way held, as misconstrued by Weil, that we are 'in agreement [with Weil] that the party Fritz et al. is not entitled to the benefit of the first Fritz et al. application [Fritz I].' We held, rather, that inasmuch as Fritz et al. are entitled to the benefit of Fritz II, the question of whether they are entitled to the benefit of Fritz I is of no moment in this case.

Nor has Weil cited authority to support his present contention that the holding in *Thompson v. Dunn* (cited in our decision should be limited to the involved application as opposed to a benefit application. Moreover, the prevailing authority is contra. In considering whether an application supports the counts, the same requirements apply whether it is the involved application or one whose benefit is sought. *Noyce v. Kilby*, 57 CCPA 1156, 416 F.2d 1391, 163 USPQ 550 (1969); cert. den. [400 U.S. 818, 91 S.Ct. 34, 27 L.Ed.2d 45] 167 USPQ 257 [(1970)].

OPINION

The Issues

The issues are:

(1) Whether Fritz IV is entitled under 35 U.S.C. § 120 to the benefit of Fritz II's filing date in view of the amended inventive entity in Fritz II?

(2) Whether the 'best mode' question--the alleged nondisclosure in Fritz II of the 'best mode' as required by 35 U.S.C. § 112, first paragraph, and incorporated in 35 U.S.C. § 120--is ancillary to priority (i. e., within the board's jurisdiction) where Fritz IV was accorded the benefit of Fritz II?

The First Issue

Noting that the board 'relied heavily' on *In re Schmidt*, supra, Weil contends that 'there is more to this issue than merely adding too many [sic, too few?] inventors to an application as will be hereinafter set out.' Weil then attacks the board's decision with respect to this issue on three grounds.

[1] The first ground is that the conversion declaration filed in Fritz II, which states that Fritz II is a continuation-in-part of Fritz I, is 'fatally defective' because Fritz I was '*never converted to three inventors*.' (Weil's emphasis.) As we understand it, Weil contends that the conversion declaration filed in Fritz II, amending the ***863** inventive entity to three applicants, is defective because it claims the benefit of Fritz I, filed by two applicants and never amended.

This argument must fall in light of 35 USC 120, supra note 6, as interpreted by this court in *In re Schmidt*. That case involved an application (Schmidt III) filed by Schmidt as sole applicant. Under § 120, Schmidt III claimed the benefit of Schmidt I, filed by Schmidt sole, and Schmidt II, filed by Schmidt and five others. During the prosecution of Schmidt III, affidavits were submitted which established that the five other applicants had joined in Schmidt II 'through

error * * * without any deceptive intention' (35 U.S.C. § 116, third paragraph, supra note 7). The inventive entity in Schmidt II was not amended in fact. [FN10] Nevertheless, as stated in *Schmidt*, 293 F.2d at 279, 48 CCPA at 1148, 130 USPQ at 409-10 (quoted supra in the board's opinion), Schmidt III was entitled in law to the benefit of the filing dates of Schmidt I and II under 35 U.S.C. § 120. The term 'the same inventor' in § 120 was broadly interpreted to embrace the possibility permitted by § 116, third paragraph. Even though Schmidt II was not amended in fact, the procedure employed was legally equivalent to such an amendment. *In re Schmidt* was decided correctly and it disposes of Weil's argument. [FN11]

> FN10. The *Schmidt* opinion implies this, and we have verified it in the *Schmidt* record.
>
> FN11. We note, of course, that in the instant case Fritz IV need only receive the benefit of Fritz II, and the inventive entity in Fritz II was amended. It is immaterial that the conversion declaration, amending the inventive entity in Fritz II, was filed after Fritz I's abandonment date.

[2] Weil's second ground of attack, as stated in his main brief on appeal, is: '[Fritz II] is defective in that its *oath* or declaration does not aver that such subject matter common to the Fritz et al. I application and Fritz et al. II application is not barred by any activity more than one year prior to the Fritz et al. II application filing date.' (Emphasis added.)

Weil's contention is not material to the question of Fritz IV's entitlement under § 120 to the benefit of Fritz II. The applicant's *oath* is not a requirement of § 112, first paragraph, but of 35 U.S.C. § 115; therefore, the sufficiency of Fritz II's oath is not material under § 120, which incorporates only the requirements of § 112, first paragraph.

[3] Weil's third (and final) ground of attack is: 'The count of the Interference is not patentable to the party Fritz et al. by reason that the invention described in the count was invented by another prior to the filing date of Fritz et al. III and as such is prior art in the sense of 35 U.S.C. 102(g).' Weil generates this argument by linking three things: (1) the board's reconsideration opinion which stated that the question of whether Fritz IV was entitled to the benefit of Fritz I 'is of no moment in this case;' (2) Weil's own 'unavoidable conclusion,' from the board's foregoing statement, that Fritz I is by 'another inventor' under 35 U.S.C. § 102(g); and, (3) *In re Bass*, 59 CCPA 1342, 474 F.2d 1276, 177 USPQ 178 (1973).

Weil's argument is unsound because the board was correct--*the question of whether Fritz IV is entitled to the benefit of Fritz I is immaterial in this interference.* See note 11, supra. Weil has *no basis* for concluding that Fritz I is evidence that the invention of the count was made 'by another' and therefore is prior art under 35 U.S.C. § 102(g). To the contrary, the amendment of Fritz II indicates that the subject matter of the count was invented by the three applicants (Fritz, Evans, and Cooke). Therefore, any disclosure in Fritz I of the invention of the count would be a disclosure of the three applicants' own invention. 'But certainly *one's own invention*, whatever the form of disclosure to the public, may not be prior art against oneself, *absent a statutory bar.' In re Facius*, 408 F.2d 1396, 1406, 56 CCPA 1348, 1358, 161 USPQ 294, 302 (1969) (emphasis in original).

We *affirm* the board on the first issue.

***864** *The Second Issue*

According to Weil's second motion (to deny Fritz IV the benefit of the filing dates of Fritz I and II), 2-CEPA is soluble in water and is 'normally' applied in an 'aqueous solution.' The motion alleged that Fritz, prior to Fritz I's filing, 'regarded [2-CEPA] to be unstable and susceptible to decomposition when contained in water solution having a pH greater than about 4.5' and that Fritz contemplated using solutions 'which would maintain the pH below about 4.5 and/or that a spray or application solution of [2-CEPA] be applied to the plants promptly after formulating the spray solution, particularly if the solutions were made up with neutral or alkaline water.' Weil urged that nondisclosure of these 'preferred operating conditions' constituted failure to disclose a 'known best mode, in contravention of 35 U.S.C. § 112,' depriving Fritz IV of 'the right to receive the benefit of the filing dates of [Fritz I and II] under 35 U.S.C. § 120.'

Fritz II, the material application (see note 11, supra), has Examples 35 and 42 which describe spraying certain plants with 'aqueous solutions' of 2- CEPA, without disclosure of pH sensitivity. Hence, this nondisclosure of the alleged 'preferred operating conditions' for 2-CEPA was the basis of Weil's second motion. [FN12]

> FN12. We observe, as the board did, that Weil has not argued noncompliance by Fritz

II with the enablement (how to make and use) requirement of the first paragraph of § 112. At oral argument, the possibility was discussed that the alleged disclosural defect could be characterized as nonenablement, but Weil's counsel insisted: 'We are not challenging the enablement of any of these applications of Fritz.' Weil's counsel offered no further explanation. However, he had stated earlier that the pH sensitivity of 2-CEPA was described in a 'technical brochure' published by Fritz's assignee in March, 1967 (prior to Fritz II). Cf. *In re Metcalfe*, 56 CCPA 1191, 1196, 410 F.2d 1378, 1381, 161 USPQ 789, 791 (1969). We also observe that Weil has not argued that the alleged nondisclosure of the best mode in Fritz II constituted fraud. Cf. *Langer v. Kaufman*, 465 F.2d 915, 59 CCPA 1261, 175 USPQ 172 (1972); *Norton v. Curtiss*, 57 CCPA 1384, 433 F.2d 779, 167 USPQ 532 (1970); *Steierman v. Connelly*, 192 USPQ 433 (Bd. Pat. Intf. 1975), *modified on reconsideration*, 192 USPQ 446 (1976).

The board, citing *Thompson v. Dunn*, 166 F.2d 443, 35 CCPA 957, 77 USPQ 49 (1948), understandably held that 'the issue of 'best mode' is not 'ancillary' to priority' and dismissed this motion on jurisdictional grounds as raising an issue 'not proper for consideration by this Board pursuant to 37 CFR 1.258 [supra note 9].'

Weil attacks the board's decision as 'clearly erroneous in view of recent developments and a clear reading of 35 U.S.C. § 120.' His principal argument is:

> The statutory basis for applicant(s) to obtain the benefit of an earlier filing date is 35 USC 120. Section 120 states in part that the earlier application must disclose the invention in the manner provided by the first paragraph of Section 112, and Section 112 unequivocally states in clear and unambiguous terms that the 'specification . . . shall set forth the best mode contemplated by the inventor of carrying out his invention.' It is not seen how the Board can avoid this issue with this clear and unequivocal language in the statute. It is believed that this portion of the statute clearly conveys jurisdiction on the Board when the question of best mode is raised when an applicant requests and is granted relief under the provisions of 35 USC 120. [FN13]

FN13. Weil refers to D. McDougall, *The Courts Are Telling Us: 'Your Client's Best Mode Must Be Disclosed,'* 59 J. Pat. Off. Soc'y 321, 333- 34 (1977), which advances a similar argument.

Weil distinguishes *Thompson v. Dunn* on the ground that Thompson was not claiming the benefit of an earlier U.S. application.

Fritz, on the other hand, defends the board's decision by quoting the relevant portion of *Thompson v. Dunn*, which we designate as [A]:

> [A]
> Counsel for appellee [Dunn] argue that as appellant [Thompson] considered the machine built by his associate McGihon to embody the best form of his invention and that, since appellant did not disclose ***865** that machine in his application, he has not complied with Sec. 4888, R.S. (U.S.C., title 35, sec. 33) which requires that an inventor shall disclose 'the best mode in which he has contemplated applying' the principle of his invention. *That argument does not relate to priority of invention, but merely to appellant's right to obtain a patent.* [Fritz's emphasis.] Accordingly, it cannot properly be considered by this court in an interference proceeding. [35 CCPA at 964, 166 F.2d at 447-48, 77 USPQ at 53.]

And, in response to Weil's argument that *Thompson v. Dunn* is distinguishable, Fritz quotes this portion of *Mahan v. Doumani*, 333 F.2d 896, 902, 51 CCPA 1516, 1522, 142 USPQ 19, 23 (1964), which we designate as [B]:

> [B]
> The [parent] 1944 application [of appellee, Doumani], in order to support the counts, need not list the specific fuels of the counts as 'the best mode contemplated by the inventor of carrying out his invention' (35 U.S.C. § 112). Only a 'written description of the invention' must be found in the 1944 application when considered in its entirety. See *Hall v. Taylor* (PA 7158), 51 CCPA 1420, 332 F.2d 844, 141 USPQ 821 [(1964)].

At oral argument, Fritz's counsel also cited two sentences in *Squires v. Corbett*, 560 F.2d 424, 433, 194 USPQ 513, 519 (Cust. & Pat.App.1977), which we designate as [C]:

> [C]
> The 'count' * * * is merely the vehicle for contesting priority which, in the opinion of the Commissioner, effectively circumscribes the interfering subject matter, thereby determining

what evidence will be regarded as relevant on the issue of priority. The 'count,' as distinguished from a party's 'claim,' need not be patentable to either party in the sense of being fully supported by either party's disclosure.

Based on [C], counsel urged that 'looking for best mode is like looking for surplusage,' that 'there is no need to have best mode disclosed provided you have a written description of the invention * * * in the earlier application,' and that the issue is what is meant by 'the right to rely on a constructive reduction to practice--in an earlier-filed application--of the count?'

[4][5] The second issue, as stated earlier, is whether the best mode question--the alleged nondisclosure in Fritz II of the best mode as required by 35 U.S.C. § 112, first paragraph, and incorporated in 35 U.S.C. § 120--is ancillary to priority (i. e., within the board's jurisdiction [FN14]) where Fritz IV was accorded the benefit of Fritz II. We hold that it is.

> FN14. 35 U.S.C. § 135(a) limits the board's jurisdiction to '[t]he question of priority of invention,' but, as explained by this court in *Hendrickson v. Ronning*, 76 F.2d 137, 140, 22 CCPA 1040, 1045, 25 USPQ 42, 45 (1935), '[i]t was found, early, that certain matters ancillary to the question of priority were immediately involved in such proceedings and, hence, these were considered.'

Weil's second motion sought to deny Fritz IV the benefit of Fritz II's filing date. Thus, it, like Weil's first motion, was a motion to shift the burden of proof, [FN15] that is, it sought to shift the burden of proof from Weil to Fritz. The motion, if granted, would make Weil the senior party and Fritz the junior party because it would deny Fritz the benefit of Fritz II and Weil's application was filed before Fritz III.

> FN15. Defined in 37 CFR 1.257(a), supra note 4.

Fritz had achieved senior-party status by accordation of the benefit of Fritz II's filing date under the provisions of 35 U.S.C. § 120, which incorporates the entire first paragraph of 35 U.S.C. § 112, [FN16] so Weil ***866** based his attack on one of the requirements underlying that statutory benefit accordation procedure.

> FN16. *Swain v. Crittendon*, 332 F.2d 820, 823, 51 CCPA 1459, 1463, 141 USPQ 811, 813 (1964), states that 'where an applicant alleges that he is entitled to rely upon a previously filed application under section 120, the parent application must comply with the first paragraph of 35 U.S.C. § 112, which provides: [quoting the *entire* paragraph].' Accord, *Martin v. Johnson*, supra, cited by the board. Fritz proposes a definitional, rather than a jurisdictional, issue: what is necessary to constitute a prior constructive reduction to practice (of the invention of the count)? *Automatic Weighing Machine Co. v. Pneumatic Scale Corp.*, 166 F. 288, 297 (CA1 1909) defines 'constructive reduction to practice' as the filing of 'a complete and allowable application;' therefore, under that view, a prior constructive reduction to practice is a previously-filed 'complete and allowable application.' However, as *Swain* and *Martin* recognize, § 120 provides a statutory definition of what constitutes a prior constructive reduction to practice. Furthermore, as *Hunt v. Treppschuh*, 523 F.2d 1386, 1389, 187 USPQ 426, 429 (Cust. & Pat.App.1975), explains, 'the § 112, first paragraph, requirements need only be met for an *embodiment* within the count' in the special situation where the count is drawn to a genus and the previously-filed application discloses only a species thereof.

This court, in *Myers v. Feigelman*, 455 F.2d 596, 600, 59 CCPA 834, 840, 172 USPQ 580, 584 (1972), held that the question of the burden of proof on a junior party in an interference was ancillary to priority because 'it is a question which is 'logically related' to the basic, jurisdiction-giving question of priority because it should be decided, logically, before the board or this court can pass on the sufficiency of the junior party's proofs.' [FN17] The same reasoning, with even greater force, applies to the question of which party has the burden of proof. [FN18]

> FN17. The 'logical relationship' test was applied again in *Nitz v. Ehrenreich*, 537 F.2d 539, 543, 190 USPQ 413, 416 (Cust. & Pat.App.1976), where this court held: 'Determination of the presence or absence of interfering subject matter is 'logically related' to the jurisdiction- conferring issue of priority because that determination necessarily precedes a priority award.'

FN18. 2 Rivise and Caesar, *Interference Law and Practice*, § 251, at 1010 (1943), state that 'the questions raised by motion to shift the burden of proof are *necessarily* ancillary * * *.' (Emphasis added.) *Weil v. Dann*, supra, referring to Weil's first motion to shift the burden of proof (alleging noncompliance with the 'same inventor' requirement of § 120), states: 'The issue raised by petitioner is ancillary to priority and is subject to consideration by the Board of Patent Interferences under 37 CFR 1.258(b).' 503 F.2d at 563, 183 USPQ at 300.

With regard to *Thompson v. Dunn*, supra [A], it is true, as [A] states, that the best mode disclosure requirement (in what is now § 112, first paragraph) relates to an applicant's 'right to obtain a patent.' But [A] does not recognize that the best mode disclosure requirement has other functions, as in this case, where it is one of the conditions precedent in the § 120 benefit- accordation procedure, [FN19] a procedure that here determines which party has the burden of proof (a question that must be logically related to the jurisdiction-giving issue of priority). Hence, we hold that when a § 120 benefit is sought, the best mode disclosure requirement is ancillary to priority. Therefore, the conclusion of law in *Thompson v. Dunn*, supra [A], is overruled to the extent that it is inconsistent with our present holding.

FN19. Of course, § 120 was enacted in the Patent Act of 1952, after *Thompson* (1948). The benefit provided by § 120, not specified in the prior statute, originated in *Godfrey v. Eames*, 1 Wall 317, 68 U.S. 317, 17 L.Ed. 684 (1864). See *In re Hogan*, 559 F.2d 595, 603, 194 USPQ 527, 535 (Cust. & Pat.App.1977).

For the same reason, the conclusion of law in *Mahan v. Doumani*, supra [B], also is overruled to the extent that it is inconsistent with our present holding.

Finally, Fritz argues that the board's decision is supported by *Squires v. Corbett*, supra [C], but the last sentence of [C] refers to 'phantom' count practice and modified patent claim practice, special situations not present here. Furthermore, [C] must be considered with the ultimate conclusion of law in *Squires v. Corbett*:

> We conclude that for an applicant to have a right to copy a patent claim he must have support for the full scope of the claim. See *Hunt v. Treppschuh* [523 F.2d 1386,] at 1389, 187 USPQ [426,] at 429 [Cust. & Pat.App.1975]. This conclusion rests on the recognition that the right to make a claim in a pending application, even for purposes of interference, depends, as it does with all pending claims, on compliance with the requirements of 35 U.S.C. § 112, first paragraph. There is no other standard. * * * [560 F.2d at 435, 194 USPQ at 520.]

***867** Thus, our present holding is not inconsistent with *Squires v. Corbett*.

In view of the foregoing, the board should not have dismissed Weil's second motion for lack of jurisdiction. Accordingly, we *reverse* the board on the second issue, and we *remand* for further proceedings, including consideration of Weil's second motion on its merits (we express no view on the merits of that motion) and consideration of the priority testimony (for completeness, i. e., to obviate another remand).

Summary

The board's decision on the first issue is *affirmed*; the board's decision on the second issue is *reversed* and the case is *remanded* for further proceedings consistent with this opinion.

REVERSED AND REMANDED.

572 F.2d 856, 196 U.S.P.Q. 600

END OF DOCUMENT

construction of a claim, however, already requires review of a separate set of documents—the prosecution history. *See Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 908, 5 USPQ2d 1788, 1793 (Fed. Cir. 1988). Therefore, convenience has not been a paramount concern.

Competing with this concern for convenience is the statutory mandate of conciseness. *See* 35 U.S.C. § 112, ¶ 1 ("The specification shall contain a written description . . . in . . . *concise*, and exact terms") (emphasis added). In furtherance of this policy goal, we have admonished against including in the specification material that is known in the art. *See, e.g., Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1534, 3 USPQ2d 1737, 1743 (Fed. Cir. 1987) ("A patent need not teach, and preferably omits, what is well known in the art."); *Howarth*, 654 F.2d at 105, 210 USPQ at 691 ("An inventor need not, however, explain every detail since he is speaking to those skilled in the art."); *In re Gay*, 309 F.2d 769, 774, 135 USPQ 311, 316 (CCPA 1962) ("Not every last detail is to be described, else patent specifications would turn into production specifications, which they were never intended to be."). Use of incorporation by reference makes the written description more concise. Requiring inventors to include every imaginable detail of a structure corresponding to a claimed means, including those widely understood by persons of ordinary skill in the art, would be the antithesis of conciseness and would result in exceedingly lengthy patents. In any event, by codifying the requirement of conciseness in section 112, ¶ 1, Congress has expressed its preference.

U.S. Patent and Trademark Office
Board of Patent Appeals and Interferences

Winter v. Fujita

Interference Nos. 104,283 and 104,284

Decided November 16, 1999

PATENTS

1. Practice and procedure in Patent and Trademark Office — Interference — Rules and rules practice (§110.1704)

"Interference-in-fact," as defined by 37 C.F.R. §1.601(j), exists when at least one claim of party that is designated to correspond to count and at least one claim of opponent that is designated to correspond to count define same patentable invention; claims define "same patentable invention," as defined by 37 C.F.R. §1.601(n), when first invention is same as, or is obvious in view of, second invention, assuming second invention is prior art with respect to first invention.

2. Practice and procedure in Patent and Trademark Office — Interference — Rules and rules practice (§110.1704)

Determination of whether interference-in-fact exists involves two-way patentability analysis, in which claimed invention of one party is presumed to be prior art with respect to second party, and vice versa; interference-in-fact is present only if claimed invention of first party anticipates or renders obvious claimed invention of second party, and claimed invention of second party anticipates or renders obvious claimed invention of first party.

3. Practice and procedure in Patent and Trademark Office — Interference — Rules and rules practice (§110.1704)

Practice and procedure in Patent and Trademark Office — Interference — Motions (§110.1717)

Patentee involved as party to interference is authorized, under 37 C.F.R. §1.633(h), to file preliminary motion to add reissue application to interference, provided motion complies with requirements of 37 C.F.R. §1.637(h); however, Section 1.637(h) should not be construed to authorize addition of reissue application to interference if application contains non-original claims which reissue applicant does not seek to have designated as corresponding to count, since rationale that supports policy of not permitting applicant in "ordinary" application to add claim and have claim designated as not corresponding to count applies with equal force to claims in reissue application sought to be added to interference.

4. Practice and procedure in Patent and Trademark Office — Interference — Rules and rules practice (§110.1704)

Practice and procedure in Patent and Trademark Office — Interference — Motions (§110.1717)

Board of Patent Appeals and Interferences will dismiss preliminary motion under 37 C.F.R. §1.633(h) that seeks to add reissue application to interference if application contains non-original claims which reissue applicant does not seek to have designated as corresponding to count; this practice does not preclude patentee in inter-

ference from filing reissue application, but such application will not be added to interference if it contains new claims which applicant does not seek to have designated as corresponding to count.

5. Practice and procedure in Patent and Trademark Office — Interference — Rules and rules practice (§110.1704)

Practice and procedure in Patent and Trademark Office — Interference — Pleadings and submissions (§110.1706)

Board of Patent Appeals and Interferences will not strike replies to senior party's opposition to junior parties' preliminary motions in present case, even though junior parties raised numerous new arguments in their replies; however, reply brief practice will be strictly enforced in future, and any reply that does not employ format required by ¶26(c) of Notice Declaring Interference will be returned.

Particular patents — Chemical — Metallocene compounds

5,455,365, Winter, Kueber, Spaleck, Riepl, Herrmann, Dolle, and Rohrmann, process for the preparation of an olefin polymer using metallocenes containing specifically substituted indenyl ligands, patentees held not entitled to claims corresponding to count in interference no. 104,283.

5,329,033, Spaleck, Rohrmann, and Antberg, process for the preparation of an olefin polymer, patentees held not entitled to claims corresponding to count in interference no. 104,284.

Patent interference no. 104,283, between Andreas Winter, Frank Kueber, Walter Spaleck, Herbert Riepl, Wolfgang A. Hermann, Volker Dolle, and Juergen Rohrmann, junior party (patent no. 5,455,365), and Takashi Fujita, Toshihiko Sugano, and Hideshi Uchino, senior party (application no. 08/678,686), consolidated with patent interference no. 104,284, between Walter Spaleck, Juergen Rohrmann, and Martin Antberg, junior party (patent no. 5,329,033), and Takashi Fujita, Toshihiko Sugano, and Hideshi Uchino, senior party (application no. 08/678,686). Junior parties' preliminary motions alleging no interference-in-fact denied; junior parties' motions that their patents should be accorded benefit of prior patent application denied; junior parties' preliminary motions to add reissue applications dismissed; senior party's motions to strike junior parties' replies denied; junior parties' motions for leave to file belated preliminary motions denied; senior party's motion for leave to file declaration dismissed; judgment on priority as to sole count in each interference awarded in favor of senior party.

[Editor's Note: The Board of Patent Appeals and Interferences states that "[p]arts I-A, III-A, III-B, and IV of this opinion are binding precedent of the Trial Section."]

Rudolph E. Hutz, Ashley I. Pezzner, and Thomas M. Meshbesher, of Connolly, Bove, Lodge & Hutz, Wilmington, Del., for junior parties.

Charles L. Gholz and Alton D. Rollins, of Oblon, Spivak, McClelland, Maier & Neustadt, Arlington, Va., for senior party.

Before Stoner,[1] chief administrative patent judge, McKelvey, senior administrative patent judge, and Schafer, Lee,[2] and Torczon, administrative patent judges.

McKelvey, senior administrative patent judge.

Interference 104,283 and Interference 104,284 are before a merits panel for entry of final decisions. Since the issues raised in both interferences are similar, the interferences are consolidated for oral argument and entry of final decisions.

Oral argument was held on 29 September 1999 before Judges McKelvey, Schafer and Torczon. Chief Judge Stoner and Judge Lee have participated in, and join, in Parts I-A, III-A, III-B and IV of this opinion.

Ashley I. Pezzner, Esq. (argued-in-part), and Thomas M. Meshbesher, Esq. (argued-in-part), appeared on behalf of Winter and Spaleck.

Charles L. Gholz, Esq., and Alton D. Rollins, Esq. (argued), appeared on behalf of Fujita.

Oral argument was transcribed by a court reporter. A copy of a transcript of oral argument has been made part of the record in each interference.

Findings of fact

The records in Interference 104,283 and Interference 104,284 support, by a prepon-

[1] Chief Judge Stoner joins in Parts I-A, III-A, III-B and IV of the opinion, all of which are binding precedent of the Trial Section; Chief Judge Stoner otherwise did not participate in deciding these interferences.

[2] Judge Lee joins in Parts I-A, III-B and IV of the opinion, all of which are binding precedent of the Trial Section; Judge Lee otherwise did not participate in deciding these interferences.

derance of the evidence, the following findings, as well as those set out in the opinion portion of this memorandum.

Junior party — Interference 104,283

1. The junior party is Andreas Winter, Frank Kueber, Walter Spaleck, Herbert Riepl, Wolfgang A. Herrmann, Volker Dolle and Juergen Rohrmann (*Winter*).[3]

2. Winter is involved on the basis of its U.S. Patent 5,455,365, granted 3 October 1995, based on application 08/101,408, filed 3 August 1993.

3. The real party in interest is Targor GmbH (*283 Paper* 10).

Junior party—Interference 104,284

4. The junior party in Interference 104,284 is Walter Spaleck, Juergen Rohrmann and Martin Antberg (*Spaleck*).

5. Spaleck is involved in Interference 104,284 on the basis of its U.S. Patent 5,329,033, granted 12 July 1994, based on application 08/142,512, filed 25 October 1993.

6. For the purpose of priority with respect to Count 1 of Interference 104,284, Spaleck has been accorded the benefit of U.S. application 07/934,573, filed 24 August 1994, now U.S. Patent 5,278,264, granted 11 January 1994.

7. The real party in interest is Targor GmbH (*284 Paper* 9).

Senior party—both interferences

8. The senior party in both interferences is Takashi Fujita, Toshihiko Sugano and Hideshi Uchino *(Fujita)*.

9. Fujita is involved in both interferences on the basis of its application 08/678,686, filed 11 July 1996.

10. For the purpose of priority with respect to Count 1 of Interference 104,283 and Count 1 of Interference 104,284, Fujita has been accorded the benefit of:

a. U.S. application 07/933,215, filed 20 August 1992, and
b. Japanese patent application 208213/1991, filed 20 August 1991 (283 Paper 25, page 2; 284 Paper 23, page 2).

11. The real party in interest is Mitsubishi Chemical Corporation (283 Paper 6).

The count and claims of the parties corresponding to the count—Interference 104,283

12. The sole count in Interference 104,283 is Count 1, which reads (283 Paper 1, page 42):

The metallocene compound according [to] claim 1 of the Winter patent

or

the catalyst according to claim 8 of the Fujita application wherein the methyl or phenyl of the R^2 (which is selected from the group consisting of methyl-1,3-butadienylene or phenyl-1,3-butadienylene) is attached to the 5-position of any indene ring.

13. The claims of the parties are:

Winter	1-6
Fujita	8-19

14. The claims of the parties which correspond to Count 1 are:

Winter	1-6
Fujita	8-14 and 16

15. The claims of the parties which do *not* correspond to Count 1 are:

Winter	None
Fujita	15 and 17-19

The count and claims of the parties corresponding to the count of Interference 104,284

16. The sole count in Interference 104,284 is Count 1, which reads (284 Paper 1, page 42):

The metallocene compound according [to] claim 1 of the Spaleck patent

or

the catalyst according to claim 8 of the Fujita application wherein the methyl or phenyl of the R^2 (which is selected from the group consisting of methyl-1,3-butadienylene or phenyl-1,3-butadienylene) is attached to the 4-position of any indene ring.

17. The claims of the parties are:

Spaleck	1-4
Fujita	8-19

18. The claims of the parties which correspond to Count 1 of Interference 104, 284 are:

Spaleck	1-4
Fujita	8-13, 15 and 17-18

[3] A list of abbreviation used in this opinion appears in an Appendix to the opinion. The first use of an abbreviation is in bold [*italics*].

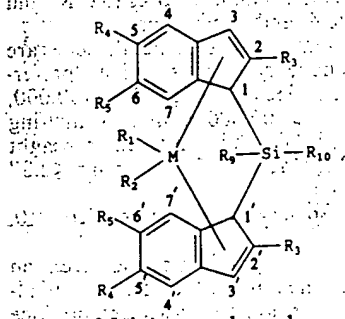
19. The claims of the parties which do *not* correspond to Count 1 of Interference 104,284 are:

Spaleck None
Fujita 14, 16 and 19

Metallocenes

20. Metallocenes are compounds which can be used as a component of a catalyst in a process for polymerizing olefins.

21. An example of a metallocene is one having the following formula:

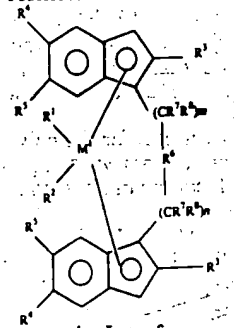


where M is a metal, such as zirconium (Zr). The R's can be various organic moieties, such as methyl (—CH_3).

22. The numbers in the formula identify the positions on the ring structures. The metallocene shown has an R^4 in both the 5 and 5' positions. As will become apparent, the position at which organic moieties are attached to the ring structure is not without significance.

Subject matter claimed by Winter in Interference 104,283

23. Winter claims metallocene compounds having the formula:



24. Important in Interference 104,283 is the position on the ring and definition of R^4 and R^5, as well as R^3.

25. According to Winter claim 1, the broadest Winter claim designated as corresponding to Count 1 of Interference 104,283, R^3, R^4 and R^5 are defined as follows:

> R^3, R^4 and R^5 are identical or different and R^3 and R^4 and/or R^5 are other than hydrogen and are a C^1-C^{20}-alkyl group, a C^6-C^{20}-aryl group, a C^2-C^{10}-alkenyl group, a C^7-C^{40}-arylalkyl group, a C^7-C^{40}-alkylaryl group or, a C^8-C^{40}-arylalkenyl group, these radicals optionally being halogenated, [and]
>
> R^5 may alternatively be hydrogen.

26. In its Preliminary Motion 2, Winter states that 283 Paper 27, page 5):

> Winter's claimed metallocenes are directed to a 2,5-substituted indenyl ligand,[4] a 2,6-substituted indenyl ligand[5] or a 2,5,6-substituted indenyl ligand[6] metallocene.

27. According to Winter, the metallocene and a cocatalyst together can be used as a catalyst to polymerize olefins (col. 1, lines 30-55).

28. The cocatalyst can be an aluminoxane (col. 5, lines 33-50).

29. According to Winter (col. 6, lines 34-50):

> It is possible to preactivate the metallocene by means of an aluminoxane * * * before use in the polymerization reaction.
>
> * * * * *
>
> The preactivation of the transition-metal compound is carried out in solution.
>
> * * * * *
>
> The concentration of the aluminoxane in the solution is in the region of about 1% by weight to the saturation limits, preferably from 5 to 30% by weight, in each case based on the total solution. The metallocene can be employed in the same concentration, but is preferably employed in an amount of from 10^{-4} to 1 mol per mole of aluminoxane. The preactivation time is from 5 minutes to 60 hours, preferably from 5 to 60 minutes. The reaction temperature is from -78°C. to 100°C., preferably from 0° to 70°C.

30. Further according to Winter (col. 7, lines 5-10):

> When the above mentioned cocatalysts are used, the actual (active) polymerization catalyst comprises the product of the reaction of the metallocene and one of said compounds. This reaction product is therefore prepared first, preferably outside the polymerization reactor, in a separate step using a suitable solvent.

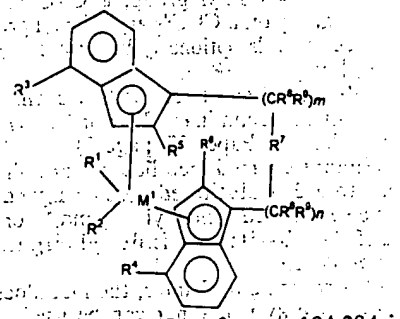
[4] When the R^5s are hydrogen and the R^4s are *not* hydrogen.

[5] When R^4s are hydrogen and R^5s are *not* hydrogen.

[6] When none of the R^4s and R^5s are hydrogen.

Subject matter claimed by Spaleck in Interference 104,284

31. Spaleck claims metallocene compounds having the formula:



32. Important in Interference 104,284 is the position on the ring and definition of R^3 and R^4. According to Spaleck claim 1, the broadest Spaleck claim designated as corresponding to Count 1 of Interference 104,284, R^3 and R^4 are defined as follows:

> R^3 and R^4 are identical or different and are a halogen atom, a C^1-C^{10}-alkyl group, which can be halogenated, a C^6-C^{10}-aryl group or an $—NR^{210}$, $—SR^{10}$, $—OSiR^{310}$, $—SiR^{310}$ or $—PR^{210}$ radical, in which R^{10} is a halogen atom, a C^1-C^{10}-alkyl group or a C^6-C^{10}-aryl group.

33. Further, according to Spaleck, the metallocene and a cocatalyst can be used to polymerize olefins (col. 2, lines 23-50).

34. The cocatalyst can be an aluminoxane (col. 8, lines 22-41).

35. Spaleck says (col. 8, line 67 through col. 9, line 50):

> It is possible for the metallocene to be preactivated with an aluminoxane * * * before use in the polymerization reaction.
>
> * * * * *
>
> The preactivation of the transition metal compound is carried out in solution.
>
> * * * * *
>
> The concentration of the aluminoxane in the solution is in the range from about 1% by weight to the saturation limit, preferably from 5 to 30% by weight, in each case based on the total solution. The metallocene can be employed in the same concentration, but it is preferably employed in an amount of 10^{-4}-1 mol per mole of aluminoxane. The preactivation time is 5 minutes to 60 hours, preferably 5- to 60 minutes.
>
> * * * * *
>
> If the above mentioned cocatalysts are used, the actual (active) polymerization catalyst comprises the reaction product of the metallocene and one of the compounds mentioned. This reaction product is therefore preferably prepared first outside the polymerization reactor in a separate step using a suitable solvent * * *.

Difference between the Winter and Spaleck metallocenes

36. A significant difference between the metallocenes claimed by Winter and those claimed by Spaleck is the position of moieties on the ring structure. In the case of Winter, R^4 is located at the 5- and 5'-positions. Spaleck, on the other hand, requires that R^3 and R^4 be at the 4- and 4'-positions.

37. The Winter activated metallocenes are said to produce polyolefins which "preferably have a molecular weight M_w >80,000, in particular >100,000 g/mol, a melting point of <145°C. and a molecular weight dispersity $M_w/M_n \leq 3.5$, in particular ≤ 2.8" (col. 8, lines 10-12).

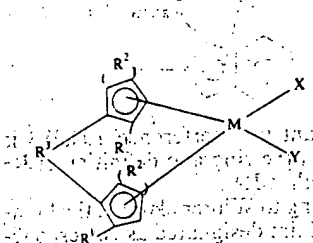
38. The Spaleck patent states (col. 10, lines 41-51):

> The process according to the invention is distinguished by the fact that the metallocene catalyst systems described produce polymers having a narrow molecular weight distribution and coarse particle morphology as well as variable molecular weight and stereotacticity in the temperature range between 30° and 80°C., which is of industrial interest, but in particular in the range between 60° and 80°C. The particular polymer molecular weight and stereotacticity desired is established by choosing suitable substituents in the 2- and 4-positions of the ligand system of the metallocene [i.e., the ring portion of the metallocene].

Subject matter claimed by Fujita in both interferences

39. The Fujita application involved in both interferences contains claims 8-19. Claim 8 is the sole independent claim and reads as follows:

> A catalyst useful for the polymerization of olefins, which catalyst comprises a transition metal compound having formula (I)



wherein:

M represents a transition metal selected from the group consisting of titanium, zirconium and hafnium;

two R^1s may be the same or different, and each represents a monovalent hydrocarbyl group having 1 to 4 carbon atoms, or a monovalent hydrocarbyl group having 1 to 4 carbon atoms and containing silicon;

R^2 is selected from the group consisting of methyl-1, 3-butadienylene and phenyl-1, 3-butadienylene;

R^3 is selected from the group consisting of a methylene group, an ethylene group and a silylene group which may or may not have a substituent of a lower alkyl group; and

X and Y independently represent a member selected from the group consisting of chlorine, lower alkyl and a lower alkyl substituted silyl group,

provided that the two five-membered cyclic ligands each have the substituents R^1 and R^2 are asymmetric about a plane containing M when viewed from their relative position in terms of the group R^3.[7]

40. Fujita claims 14-19 call for specific metallocenes.

41. Fujita claims 14 and 16 call for a methyl group at the 5- and 5'-positions. Accordingly, these claims were designated to correspond to the count in Interference 104,283, but not to the count in Interference 104,284.

42. Fujita claims 15, 17 and 18 call for a methyl or phenyl group in the 4- and 4'-positions. Accordingly, these claims were designated to correspond to the count in Interference 104,284, but not the count in Interference 104,283.

43. Fujita claim 19 calls for a methyl group in both the 4-, 4'-, 7- and 7'-positions. The examiner determined that Fujita claim 19 should be designated as *not* corresponding to the count in either interference. The examiner's determination is not contested by Winter, Spaleck or Fujita.

44. Fujita claims 8-13 mention a metallocene which is "generic" in the sense that a substituent may appear in either the 4- and 4'- or 5- and 5'-positions. Accordingly, these claims were designated as corresponding to the count in both interferences.

45. According to the specification of the involved Fujita application, the invention "comprises the following component (A) and component (B)" (page 2, lines 22-23).

46. Component (A) is a metallocene (page 2, line 24 *et seq.*).

47. Component (B) is an aluminoxane (page 3, line 25 *et seq.*).

48. According to Fujita (page 13, lines 5-9):

> The catalyst according to the present invention can be prepared by bringing the above-described component (A) and component (B) into contact with each other in the presence or absence of monomers to be polymerized, inside or outside an autoclave.

49. Further according to Fujita (page 13, lines 29-33):

> When the above catalyst system is used for the polymerization of an olefin, the components (A) and (B) may be introduced into a reaction vessel either separately or after being brought into contact with each other.

50. Fujita, acting as its own lexicographer, states in its specification (page 4, lines 16-20):

> The expression "comprising component (A) and component (B)" herein means that it is possible to use a third component other than components (A) and (B) as long as it does not impair the effects of the present invention.[8]

Preliminary and other motions before the merits panel

51. In their respective preliminary statements, the parties do not allege a conception or actual reduction to practice prior to their filing dates.

52. Winter and Spaleck have filed several preliminary motions.

[7] Perhaps the "provided" paragraph should read: "provided that the two five-membered cyclic ligands each have the substituents R^1 and R^2 asymmetric about a plane containing M when viewed from their relative position in terms of the group R^3.

[8] It would appear that Fujita could have used the language "consisting essentially" in place of defining "comprising" in a manner contrary to its normal meaning. *Compare In re Janakirama-Rao*, 317 F.2d 951, 954, 137 USPQ 893, 896 (CCPA 1963) (the presence of "consisting essentially of" in a composition claim leaves the scope of the claim open only to the inclusion of unspecified ingredients which do not materially affect the basic and novel characteristics of the composition); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948) (definition of comprising, consisting and consisting essentially). *See also PPG Industries, Inc. v. Guardian Industries Corp.*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-1354 (Fed. Cir. 1998).

53. Fujita did not file any preliminary motion.

54. Accordingly, each party is restricted to its filing date subject to an effort by Winter (Preliminary Motion 2) and Spaleck (Preliminary Motion 2) to be accorded the benefit of the filing date of earlier U.S. and German patent application.

55. Hence, a decision on preliminary motions resolves the interferences (283 Paper 25, page 3; 284 Paper 23, page 3; *Tr 7:1-13*).

56. The following preliminary motions and other motions are before the merits panel:

(1) Winter Preliminary Motion 1 for judgment based on no interference-in-fact between Winter and Fujita (283 Paper 26). 37 CFR § 1.633(b).

(2) Spaleck Preliminary Motion 1 for judgment based on no interference-in-fact between Spaleck and Fujita (284 Paper 25). 37 CFR § 1.633(b).

(3) Winter Preliminary Motion 2 to be accorded benefit of two prior U.S. patent applications and a German patent application filed 12 November 1990 (283 Paper 27). 37 CFR § 1.633(f).

(4) Spaleck Preliminary Motion 2 to be accorded benefit of two prior U.S. patent applications and a German patent application filed 12 November 1990 (284 Paper 26). 37 CFR § 1.633(f).

(5) Winter Preliminary Motion 3 (283 Paper 28) to add to Interference 104,283, application 09/252,719, filed 19 February 1999 (*Winter 719*) (*WEx* 1001),[9] to reissue involved Winter U.S. Patent 5,455,365. 37 CFR § 1.633(h).

(6) Spaleck Preliminary Motion 3 (284 Paper 27) to add to Interference 104,284, application 09/253,832, filed 19 February 1999 (*Spaleck 832*) (*SEx* 1001),[10] to reissue involved Spaleck U.S. Patent 5,329,033. 37 CFR § 1.633(h).

(7) Winter Rule 635 motion (283 Paper 56) for leave to file a belated Winter Preliminary Motion 4 to question the enablement of the Fujita application.

(8) Spaleck Rule 635 motion (284 Paper 57) for leave to file a belated preliminary motion to question the enablement of the Fujita application.

(9) Fujita has filed a Rule 635 motion (283 Paper 50) to strike Winter Reply 1 (283 Paper 44). Winter Reply 1 was filed in response to Fujita's opposition to Winter Preliminary Motion 1.

(10) Fujita has filed a Rule 635 motion (284 Paper 51) to strike a Spaleck Reply 1 (284 Paper 44). Spaleck Reply 1 was filed in response to Fujita's opposition to Spaleck Preliminary Motion 1.

(11) Fujita has filed FUJITA MOTION 2, a Rule 635 motion (283 Paper 71; 284 Paper 72) seeking leave to file a declaration of Dr. Tobin Marks (FEx 2010).

Interference-in-fact

57. There is no claim in the involved Winter patent which is identical to a claim in the involved Fujita application.

58. There is no claim in the involved Spaleck patent which is identical to a claim in the involved Fujita application.

59. The parties agree that Winter claim 1 is directed to compounds (283 Paper 26, page 3; 283 Paper 32, page 2).

60. The parties agree that Spaleck claim 1 is directed to compounds (284 Paper 25, page 3; 284 Paper 2).

61. The parties do not agree that Fujita claim 8—the sole independent Fujita claim—is directed to a compound.

62. In fact, Winter and Spaleck disagree with Fujita as to the scope and meaning of Fujita claim 8.

63. The parties agree that metallocene compounds have uses other than polymerization catalysts (283 Paper 26, page 3; 283 Paper 32, page 2; 284 Paper 25, page 3; 284 Paper 31, page 2).

64. Winter and Spaleck maintain that examiners have made requirements for restriction (35 U.S.C. § 121) between what they call "polymerization catalyst claims" and "metallocene claims" (283 Paper 26, page 3; 284 Paper 25, page 3).

Winter and Spaleck preliminary motions for benefit of earlier U.S. and German applications

65. Winter and Spaleck have filed preliminary motions to be accorded the benefit for the purpose of priority (37 CFR § 1.633 (f)) of:

a. U.S. application 08/101,408, filed 3 August 1993.

b. U.S. application 07/789,361, filed 8 November 1991, now U.S. Patent 5,276,208, granted 4 January 1994.

c. German patent application P 4 035 884.4, filed 12 November 1990.

[9] The serial number (08/101,408) and filing date (August 3, 1993) mentioned on the first page of WEx 1001 are those for the application which matured into the patent sought to be reissued and not the reissue application.

[10] The serial number (08/142,512) and filing date (October 25, 1993) mentioned on the first page of SEx 1001 are those for the application which matured into the patent sought to be reissued and not the reissue application.

66. Fujita does not oppose benefit with respect to application 08/101,408 (283 Paper 34, page 1; 284 Paper 33, page 1).

67. At oral argument, counsel for Fujita agreed that if Winter or Spaleck are entitled to benefit of application 07/789,361, they would also be entitled to benefit of the German patent application (283 Paper 61, page 3; 284 Paper 62, page 3; Tr 50:20 to 51:9).

68. Accordingly, the Winter and Spaleck preliminary motions for benefit will be resolved on the basis of whether Winter and Spaleck respectively are entitled to benefit for the purpose of priority of application 07/789,361, which is now U.S. Patent 5,276,208 (Patent 208) (WEx 1002; SEx 1002).

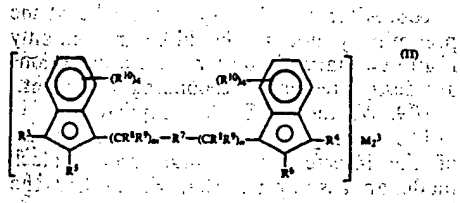
69. Patent 208 describes metallocenes (col. 1, lines 7 and 35-50).

70. Patent 208 states (col. 1, lines 7-11):

> The present invention relates to novel metallocenes which contain ligands [i.e., the ring structures] of 2-substituted indenyl derivatives and can very advantageously be used as catalysts in the preparation of polyolefins of high melting point (high isotacticity).

71. Patent 208 describes metallocenes having Formula I (col. 1, lines 40-55).

72. According to Patent 208, the metallocenes of Formula I can be made from compounds having Formula II (col. 4, lines 37-55):



wherein:

R^{10} is identified as being identical or different and is as defined for R^{11}, R^{12} and R^{13} (col. 3, lines 63-64).

73. R^{11}, R^{12} and R^{13} can be a wide variety of moieties (col. 2, lines 25-33).

74. The metallocenes of Formula I do not fall within the scope of the count of Interference 104,283 or Interference 104,284; the 6-member rings of the metallocenes of Formula I are not aromatic.

75. On the other hand, the 6-member rings of the compound of Formula II are aromatic as is apparent from the circle inside the ring.

76. According to Patent 208 (col. 3, line 64 through col. 4, line 13):

> The radicals R^{10} are preferably hydrogen atoms or C_1-C_{10}-, preferably C_1-C_4-, alkyl groups.
>
> The particularly preferred metallocenes are thus those in which * * * R^{10} is hydrogen; in particular the compounds I listed in the working examples.

77. There is no description in Patent 208 of a metallocene having a non-hydrogen moiety R^{10} group specifically in the 4-, 4'-, 5- or 5'-positions.

78. Rather, according to Patent 208, the compounds of Formula (II) have four R^{10} groups some of which may be alkyl groups (e.g., methyl groups).

79. Patent 208 does not emphasize or describe any advantage of having an alkyl group in the 4-, 4'-, 5- or 5'-positions.

80. Rather, Patent 208 emphasizes a requirement that the R^5 and R^6 moieties in 2- and 2'-positions be something other than hydrogen (col. 2, lines 5-7; see also col. 1, line 67 *et seq.*), such as alkyl, particularly methyl (col. 3, lines 3-6).

81. At oral argument, Mr. Meshbesher, counsel for Winter and Spaleck, emphasized the importance of a moiety position on a metallocene ring as follows (Tr 34:9-12 and 39:13-21):

> Well, each metallocene almost has to be considered on its merits because the positioning of groups of the 6-member ring of the metallocene affects its performance.

and

> There is a difference in behavior—well, they all have in common a substituent in the 2 position of the indenyl, but there's another 6-member ring and there it matters where—let's say your substituent is a methyl group, it matters whether you put the methyl group at the 4, 5, 6 or 7 position, and it matters whether there are two methyl groups and where they happen to be located.

82. Mr. Meshbesher's observations are factually correct and are supported by the record.

83. Patent 208 does not contain a written description of the subject matter claimed in the involved Winter patent.

84. Patent 208 does not contain a written description of the subject matter of Count 1 of Interference 104,283.

85. Patent 208 does not contain a written description of a species within the scope of the claims of the involved Winter patent.

86. Patent 208 does not contain a written description of a species within the scope of the count of Interference 104,283.

87. Patent 208 does not contain a written description of the subject matter claimed in the involved Spaleck patent.

88. Patent 208 does not contain a written description of the subject matter of Count 1 of Interference 104,284.

89. Patent 208 does not contain a written description of a species within the scope of the claims of the involved Spaleck patent.

90. Patent 208 does not contain a written description of a species within the scope of the count of Interference 104,284.

Addition of Winter 719 reissue application

91. Winter 719 reissue application contains claims 1-12.

92. Winters seeks to have claims 1-6 designated as corresponding to the count of Interference 104,283.

93. Claims 1-6 are identical to claims 1-6 of Winter's involved patent.

94. Fujita opposes Winter Preliminary Motion 3 on the ground that (283 Paper 36, page 3):

> Winter seeks to amend the interference by adding to its reissue application claims to be designated as not corresponding to the count.

95. Accordingly, Fujita maintains that the "motion should be dismissed" (*id.*).

96. Alternatively, Fujita maintains that Winter 719 claims 7-12 should be designated as corresponding to Count 1 of Interference 104,283.

Addition of Spaleck 832 reissue application

97. Spaleck 832 reissue application contains claims 1-10.

98. Spaleck seeks to have claims 1-4 designated as corresponding to the count of Interference 104,284.

99. Claims 1-4 are identical to claims 1-4 of Spaleck's involved patent.

100. Fujita opposes Spaleck Preliminary Motion 3 on the ground that (284 Paper 35, page 3):

> Spaleck seeks to amend the interference by adding to its reissue application claims to be designated as not corresponding to the count.

101. Accordingly, Fujita maintains that the "motion should be dismissed" (*id.*).

102. Alternatively, Fujita maintains that Spaleck 832 claims 5-10 should be designated as corresponding to Count 1 of Interference 104,284.

Background as to how issue of designation of new Winter and Spaleck reissue claims arose

103. Consistent with the practice of the Trial Section, prior to setting the times for taking action during the preliminary motion phase of the interference, a conference call took place with counsel (*see, e.g.*, 283 Paper 25, pages 1-2).

104. During the conference call, Winter and Spaleck indicated that they would file a reissue application and would move to add their respective reissue applications to the respective interferences.

105. As a result of the conference call, the following observation was made by the administrative patent judge designated to handle the interferences (283 Paper 25, page 2):

> With respect to the preliminary motion to add a reissue application, it was indicated by Winter that it would be Winter's position that not all claims in the reissue application would be designated as corresponding to the count. In the event the preliminary motion is filed and Fujita believes that claims in the reissue application should be designated as corresponding to the count, Fujita should oppose the preliminary motion and request that additional reissue application claims be designated as corresponding to the count.

106. In due course, Winter filed Winter Preliminary Motion 3 and Spaleck filed Spaleck Preliminary Motion 3 to add their respective reissue applications.

107. As indicated earlier, Fujita responded by arguing that the preliminary motions should be dismissed.

108. Alternatively, Fujita argued that the preliminary motions should be granted only if all new claims in both reissue applications are designated as corresponding to a count.

109. Winter and Spaleck replied.

110. During the preliminary motion phase of the interference, Winter and Spaleck made an assumption that Fujita had the burden of proof to the extent Fujita sought to have new claims in the reissue applications designated as corresponding to the count. Given the state of the record, the assumption was not unreasonable.

111. Fujita made an assumption, and maintains to this day, that Winter and Spaleck had the burden of proof. Given the state of the record, Fujita's assumption is likewise not unreasonable.

112. Following oral argument on preliminary motions, Fujita was given an opportunity to respond to the Winter and Spaleck replies, principally in case it turned out that Fujita had the burden of proof.

113. The Fujita response was accompanied by FUJITA MOTION 2, a Rule 635 motion to leave to file a declaration of Dr. Tobin Marks (283 Paper 71; 284 Paper 72).

114. The declaration is said to be necessary to establish that the non-original patent claims in the Winter and Spaleck reissue applications are directed to the same invention as the count of the interference into which the reissue is sought to be added.

Opinion

Part I.

Interference-in-fact

A.

Winter maintains that there is no interference-in-fact between Winter and Fujita.

Spaleck maintains that there is no interference-in-fact between Spaleck and Fujita.

[1] An "interference-in-fact" is a term of art in interference practice. The rules define an "interference-in-fact" as follows (37 CFR § 1.601(j)):

> An *interference-in-fact* exists when at least one claim of a party that is designated to correspond to a count and at least one claim of an opponent that is designated to correspond to the count define the same patentable invention.

The rules define "same patentable invention" as follows (37 CFR § 1.601(n)):

> Invention "A" is the *same patentable invention* as an invention "B" when invention "A" is the same as (35 U.S.C. 102) or is obvious (35 U.S.C. 103) in view of invention "B" assuming invention "B" is prior art with respect to invention "A". Invention "A" is a *separate patentable invention* with respect to invention "B" when invention "A" is new (35 U.S.C. 102) and non-obvious (35 U.S.C. 103) in view of invention "B" assuming invention "B" is prior art with respect to invention "A".

Subparts (j) and (n) of Rule 601 implement holdings of the former Court of Customs and Patent Appeals. *See, e.g., Aelony v. Arni*, 547 F.2d 566, 192 USPQ 486 (CCPA 1977) (an interference-in-fact held to exist between a claim to a method of using cyclopentadiene and a claim to a method of using cyclopentadiene and a claim to a method using butadiene, isoprene, dimethylbutadiene, piperylene, anthracene, perylene, furan or sorbic acid; the claims were held to be directed to the same patentable invention even though they did not overlap in scope). *See also* Notice of Final Rule, Patent Interference Cases, 49 Fed. Reg. 48416 (Dec. 12, 1984) (*see* Examples 16 at 48421 and Example 20 at 48424).

An issue of whether an interference-in-fact exists is placed before the board by the filing of a preliminary motion under 37 CFR § 1.633(b). If the preliminary motion is granted, both parties would be entitled to a patent containing their respective claims initially designated as corresponding to the count because those claims would be determined to be directed to separate patentable inventions."

[2] Resolution of an interference-in-fact issue involves a two-way patentability analysis. The claimed invention of Party A is presumed to be prior art vis-a-vis Part B and vice versa. The claimed invention of Party A must anticipate or render obvious the claimed invention of Part B *and* the claimed invention of Party B must anticipate or render obvious the claimed invention of Party A. When the two-way analysis is applied, then regardless of who ultimately prevails on the issue of priority, the Patent and Trademark Office (PTO) assures itself that it will not issue two patents to the same patentable invention.

B.

Winter and Spaleck maintain that their respective patent claims and the claims of Fujita are directed to "separate patentable invention[s]" within the meaning of 37 CFR § 1.601(n). We understand the argument to be the following:

1. Winter and Spaleck claim metallocene compounds.
2. Metallocene compounds have utility other than as a catalyst for making polyolefins.
3. Fujita claim 8—the only independent Fujita claim—is directed to a catalyst system in which a metallocene is used as an ingredient for making an activated "catalyst system."
4. According to Winter and Spaleck a "catalyst system" involves a reaction product of the metallocene and an activator, alternatively, the metallocene and activator are somehow bound one

" *See* Notice of Final Rule, *supra* at 48440 ("Two comments questioned the nature of the judgment when a motion under § 1.633(b) is granted. Section 1.633(b) authorizes the filing of a [preliminary] motion for judgment on the ground that there is no interference-in-fact. If a [preliminary] motion under § 1.633(b) is granted, the judgment would provide that each party is entitled to a patent containing that party's claims corresponding to the count.").

with the other in some chemical fashion.

5. Examiners in the Patent and Trademark Office routinely have required restriction (35 U.S.C. § 121) between metallocenes *per se* and catalyst systems made from metallocenes.
6. A metallocene and a "catalyst system" made from a metallocene are separate patentable inventions and therefore there is no interference-in-fact between Winter/Spaleck and Fujita.

The party filing a preliminary motion for judgment alleging no interference-in-fact has a burden of proving its case by a preponderance of the evidence. *See* 37 CFR § 1.637(a), first sentence, and *compare Bruning v. Hirose*, 161 F.3d 681, 684, 48 USPQ2d 1934, 1937 (Fed. Cir. 1998) (burden of proof on the issue of patentability of the claims of a patent in an interference where applications are copending is by a preponderance of the evidence).

C.

At oral argument, it became apparent that the parties do not agree on the scope of, or the meaning of terms in, Fujita claim 8. The language of Fujita claim 8 which appears to create the disagreement is that which reads "A catalyst useful for the polymerization of olefins which catalyst comprises * * *." Fujita maintains that Fujita claim 8 covers a metallocene *per se*. Winter and Spaleck maintain that (1) Fujita claim 8 is limited to a "catalyst system," (2) does not cover a metallocene *per se* and (3) accordingly, there is no interference-in-fact.

Construction of the meaning of words in a patent claim is an issue of law to be resolved based on the facts of each case. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391, 116 S.Ct. 1384, 1396 (1996) (interpretation of the word "inventory" [in a patent claim] in this case is an issue for the judge, not the jury * * *."); *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1577, 40 USPQ2d 1019, 1022 (Fed. Cir. 1996) (significance to be given a limitation in a patent claim is a question of law which is resolved based on particular facts).

D.

Fujita claim 8 could have been presented simply as "A transition metal compound having formula (I):" followed by Formula (I). It was not. Rather, it contains additional language which reads "A catalyst useful for the polymerization of olefins which catalyst comprises * * *." What is the significance, if any, of the additional language?

As a general proposition, we believe that it is appropriate, where possible, to assign some meaning to each word of a claim. Thus, like the words of a statute, each word in a claim should be given meaning if possible.

The record reveals that Winter, Spaleck and Fujita describe metallocene compounds which when activated (generally with an aluminoxane) can be used to polymerize olefins. While it may be a matter of debate as to whether the Winter, Spaleck and/or Fujita metallocenes will function as a catalyst *per se* (*see, e.g.*, Tr 13:18-22), there is little doubt that the metallocenes are, at least preferably, activated with a cocatalyst. Catalysis is not a precise science as evidenced by the different results which the Winter and Spaleck patents say are obtained depending on where substituents are placed on the ring structure.[12] It is possible that within the scope of the metallocenes of Formula (I) of Fujita claim 8, there *may* be some metallocene species, even when activated, which will not function for the utility described by Fujita. Fujita avoids any side-show issue of whether its enabling disclosure is commensurate in scope [13] with the breadth of Fujita claim 8 by *limiting* the metallocenes of Formula (I) to those which, when used in the manner described in the Fujita specification, will be "useful for the polymerization of olefins * * *."

In the context of the Fujita specification, the activated catalyst used to make polyolefins is some combination of a metallocene and an activator. Hence, Fujita's use of "which catalyst comprises", means that the catalyst must be a metallocene within the scope of Formula (I). In the final analysis,

[12] We wish to emphasize that the Winter and Spaleck patents are not admissible in evidence to prove the truth of statements made herein. *See* NOTICE DECLARING INTERFERENCE, ¶ 41. Each patent is admissible, however, to prove what is described therein and perhaps may be used as an admission by a party opponent. Each patent describes results which are said to be obtained when the metallocenes described therein are used to polymerize olefins.

[13] *See, e.g., In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (given relative incomplete understanding in biotechnological field involved and the lack of a reasonable correlation between the narrow disclosure in Vaeck's specification and the broad scope of protection sought in the claims, PTO did not err in entering rejection based on 35 U.S.C. § 112, first paragraph, for lack of enablement); *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970) (the scope of enablement obviously varies inversely with the degree of unpredictability of the factors involved.

we agree with the following statement made at oral argument by Mr. Rollins, counsel for Fujita (Tr 59:5-14):

> The Fujita claim has at most three limitations. One limitation is on the structure of the metallocene compound, and I think that's quite straightforward. Another limitation or both of the other limitations appear in the preamble. One limitation is that nothing is within the scope of the claim unless it's a catalyst, and whether you consider a part of the same limitation as the catalyst or a different limitation, it has to be a catalyst useful for the polymerization of olefins.[14]

Based on our construction of Fujita claim 8, as outlined above, we hold, as a matter of law, that Fujita claim 8 covers a metallocene having Formula (I), but only those metallocenes within the scope of Formula (I) which can be used along with an activator to polymerize olefins. It further follows that Fujita dependent claims 14 and 16 cover specific metallocenes which fall within the scope of Winter claim 1. It still further follows that Fujita dependent claims 15, 17 and 18 cover specific metallocenes which fall within the scope of Spaleck claim 1.

E.

The subject matter of Fujita claims 14 and 16 anticipates (35 U.S.C. § 102) the subject matter of Winter claim 1, if one presumes—as we must in an interference-in-fact analysis—that the subject of Fujita claims 14 and 16 is prior art vis-a-vis Winter. Likewise, the subject matter of Winter claim 6 anticipates (35 U.S.C. § 102) the subject matter of Fujita claim 8 if one presumes that the subject matter of Winter claim 6 is prior art vis-a-vis Fujita. Hence, there is an interference-in-fact between the Winter claims and the Fujita claims designated as corresponding to the count of Interference 104,283.[15]

F.

The subject matter of Fujita claims 15, 17 and 18 anticipates (35 U.S.C. § 102) the subject matter of Spaleck claim 1, if one presumes that the subject of Fujita claims 15, 17 and 18 is prior art vis-a-vis Spaleck. Likewise, the subject matter of Spaleck claim 4 anticipates (35 U.S.C. § 102) the subject matter of Fujita claim 8 if one presumes that the subject matter of Spaleck claim 4 is prior art vis-a-vis Fujita. For example, the compound "rac-dimethylsilylbis(1-(2,4-dimethylindenyl) zirconium dichloride" reads on Fujita claim 8 when:

(1) M is zirconium;
(2) R^3 is methyl-1,3-butadienylene (where the methyl is substituted at the 4- and 4'-positions)
(3) R^3 is a silylene group substituted with two methyl groups (i.e., lower alkyl groups);
(4) X and Y are chloro groups.

Hence, there is an interference-in-fact between the Spaleck claims and the Fujita claims designated as corresponding to the count of Interference 104,284.[16]

G.

Notwithstanding our construction of the scope of Fujita claim 8, we believe that Winter and Spaleck have failed to sustain their burden of establishing no interference-in-fact even if Fujita claim 8 is construed to be limited to a metallocene "catalyst system" activated with an aluminoxane.

Winter, Spaleck and Fujita ultimately use their respective metallocenes in the same manner. The metallocene and an activator, e.g., an aluminoxane, are mixed and then placed in a polymerization reactor or are mixed in the polymerization reactor along with the olefin monomer to be polymerized.

Given the similar manner in which all say their metallocenes are used, if one presumes that the Winter metallocene is prior art vis-a-vis Fujita, then it manifestly would have

[14] *See also* Tr 66:6-16: "MR. ROLLINS: So if you have a compound which is a metallocene within the scope of the claim and it is capable of acting together with an activator or without an activator, either, to polymerize olefins, it's within the scope of the claim. It's rather that simple. JUDGE McKELVEY: Actually you meant to say if you have a metallocene within the scope of the formula ——. MR. ROLLINS: Of the formula, that's correct."

[15] Winter has not moved to have any of its claims 1-6 designated as not corresponding to the count of Interference 104,283; hence, all Winter claims stand or fall together with respect to the interference-in-fact issue.

[16] Spaleck has not moved to have any of its claims 1-4 designated as not corresponding to the count of Interference 104,284; hence, all Spaleck claims stand or fall together with respect tot he interference-in-fact issue. In particular, we note that with respect to the no interference-in-fact issue, Spaleck does not maintain that Spaleck claim 4 is entitled to any separate consideration, although later with respect to Preliminary Motion 3, Spaleck maintains that certain of (but not all) of the racemic metallocenes within the scope of Spaleck claim 4 are separately patentable from the count of Interference 104,284.

been obvious (35 U.S.C. § 103) to mix the Winter metallocene with an aluminoxane to make the "catalyst system" which Winter says is covered by Fujita claim 8. Likewise, if we presume that Fujita is prior art vis-a-vis Winter, then if one skilled in the art would have appreciated which metallocene is used to make the activated catalysts of Fujita claim 14. That metallocene anticipates (35 U.S.C. § 102) Winter claim 1.

If one presumes that the Spaleck metallocene is prior art vis-a-vis Fujita, then it manifestly would have been obvious (35 U.S.C. § 103) to mix the Spaleck metallocene with an aluminoxane to make the "catalyst system" which Spaleck says is covered by Fujita claim 8. Likewise, if we presume that Fujita is prior art vis-a-vis Spaleck, then if one skilled in the art would have appreciated which metallocene is used to make the activated catalysts of Fujita claim 15. That metallocene anticipates (35 U.S.C. § 102) Winter claim 1.

H.

Winter has failed to sustain its burden of demonstrating that there is no interference-in-fact between Winter and Fujita in Interference 104,283. Accordingly, Winter Preliminary Motion 1 is *denied*.

Spaleck has failed to sustain its burden of demonstrating that there is no interference-in-fact between Spaleck and Fujita in Interference 104,284. Accordingly, Spaleck Preliminary Motion 1 is *denied*.

Part II.

Winter and Spaleck request, for benefit

A.

Winter and Spaleck, in their respective Preliminary Motion 2, request to be accorded the benefit for the purpose of priority of Patent 208. Fujita opposes their requests. Resolution of the issue of whether Winter and/or Spaleck should be accorded benefit turns on whether Patent 208 sufficiently describes the subject matter of the count of Interference 104,283 and/or the count of Interference 104,284.

B.

Winter and Spaleck can succeed if they can demonstrate that Patent 208 describes a species within the scope of the relevant count. *Hunt v. Treppschuh*, 523 F.2d 1386, 1389, 187 USPQ 426, 429 (CCPA 1975) (an application need only disclose a single enabled embodiment within the scope of the count to constitute a constructive reduction to practice of the invention of the count).[11]

We have found, however, that Patent 208 does not describe a species within the count of Interference 104,283 or the count of Interference 104,284. Accordingly, Winter and Spaleck are not entitled to be accorded benefit for the purpose of priority based on the principles of *Hunt v. Treppschuh*.

C.

The fact that Patent 208 does not describe a species within the scope of the count of Interference 104,283 or the count of Interference 104,284 is not fatal to the Winter and Spaleck effort to be accorded benefit of Patent 208. In other words, we would not foreclose a possibility that in an appropriate case a benefit application might contain a sufficient description of the subject matter of the count or a party's claims corresponding to the count to justify according benefit notwithstanding the absence of a description of a species within the scope of the count (Tr 76:20 to 77:5).

In Interference 104,283, the count requires that there be a substituent on the 5- and/or 6-position of each ring structure (i.e., the R^4 or R^6 of Winter and the methyl or phenyl of the R^2 of Fujita is attached to the 5-position of the indene ring). The question thus becomes whether Patent 208 contains a sufficient description of the requirement for a substituent in the 5- and/or 6-position.

D.

Our appellate reviewing court made the following observation in *Eiselstein v. Frank*, 52 F.3d 1035, 1040, 34 USPQ2d 1467, 1470 (Fed. Cir. 1995) (citations omitted):

> "Satisfaction of the description requirement insures that subject matter presented in the form of a claim subsequent to the filing date of the application was sufficiently disclosed at the time of filing so that the prima facie date of invention can fairly be held to be the filing date of the application." In order to determine whether a prior application meets the "written description" requirement with respect to later filed claims, the prior application need not describe the claimed subject matter in exactly the same terms as used in the claims; it must simply indicate to persons skilled in the art that as of the earlier date the applicant had invented what is now claimed. The test is whether the disclosure of the application relied upon reasonably

[11] A rationale which supports the holding in *Hunt v. Treppschuh* is that if a party describes a single species within the scope of the count, the opposing party is not entitled to a patent covering subject which is not patentably distinct from the disclosed species.

conveys to a person skilled in the art that the inventor had possession of the claimed subject matter at the time of the earlier filing date. "Precisely how close the original description must come to comply with the description requirement of § 112 must be determined on a case-by-case basis."

Our appellate reviewing court also observed in *Fujikawa v. Wattanasin*, 93 F.3d 1559, 1570-71, 39 USPQ2d 1895, 1904-05 (Fed. Cir. 1996) (citations omitted):

As the Board recognized, however, *ipsis verbis* disclosure is not necessary to satisfy the written description requirement of section 112. Instead, the disclosure need only reasonably convey to persons skilled in the art that the inventor had possession of the subject matter in question. In other words, the question is whether Wattanasin's "application provides adequate direction which reasonably [would lead] persons skilled in the art" to the sub-genus of the proposed count.

Many years ago our predecessor court graphically articulated this standard by analogizing a genus and its constituent species to a forest and its trees. As the court explained:

It is an old custom in the woods to mark trails by making blaze marks on the trees. It is no help in finding a trail . . . to be confronted simply by a large number of unmarked trees. Appellants are pointing to trees. We are looking for blaze marks which single out particular trees. We see none.

* * * * *

Were we to extend Ruschig's metaphor to this case, we would say that it is easy to bypass a tree in the forest, even one that lies close to the trail, unless the point at which one must leave the trail to find the tree is well marked. Wattanasin's preferred embodiments do blaze a trail through the forest; one that runs close by Fujikawa's proposed tree. His application, however, does not direct one to the proposed tree in particular, and does not teach the point at which one should leave the trail to find it.

E.

We do not find the necessary blaze marks in Patent 208.

Patent 208 describes a genus which embraces compounds having substituents in the 5-, 5'-, 6- and 6'-positions. However, Patent 208 does not specifically describe any particular compound with a substituent in the 5- and/or 6-positions. Patent 208 says that the preferred metallocenes are those wherein R^{10} is hydrogen (col. 3, line 67 through col. 4, line 13). All of the Patent 208 examples appear to describe metallocenes wherein all the R^{10}s are hydrogen.

Winter and Spaleck acknowledge that the position of the substituent at the 5- and/or 6-position is not without significance. *See* Finding 81. Metallocenes with substituents at the 5- and 6-position, on this record, are patentably distinct from metallocenes with substituents at the 4-position. Otherwise, there would have been only one interference declared between Winter and Spaleck versus Fujita. The parties have treated the counts in the two interferences as patentably distinct. Both Winter (Findings 25-26) and Spaleck (Findings 32 and 38) emphasize the importance of the position where substituents are attached. Accordingly, Patent 208 does not contain the necessary description to accord Winter and Spaleck its benefit for the purpose of priority in these interference. *Cf. Bigham v. Godtfredsen*, 857 F.2d 1415, 1417-18, 8 USPQ2d 1266, 1268-69 (Fed. Cir. 1988.).

Winter has failed to sustain its burden of demonstrating that it is entitled to be accorded the benefit for the purpose of priority of Patent 208 in Interference 104,283. Accordingly, Winter Preliminary Motion 2 is *denied*. Because Winter will not be accorded benefit and there will be no priority testimony, a judgment will be entered in favor of Fujita on the issue of priority.

Spaleck has failed to sustain its burden of demonstrating that it is entitled to be accorded the benefit for the purpose of priority of Patent 208 in Interference 104,284. Accordingly, Spaleck Preliminary Motion 2 is *denied*. Because Spaleck will not be accorded benefit and there will be no priority testimony, a judgment will be entered in favor of Fujita on the issue of priority.

III.

Preliminary motions to add reissue applications

A.

The rules authorize a patentee involved as a party in an interference to file a preliminary motion to add a reissue application to an interference. 37 CFR § 1.633(h). The preliminary motion must comply with the requirements of 37 CFR § 1.637(h). Rule 637(h) provides (emphasis added):

§ 1.637 Content of motions.

(h) A preliminary motion to add an application for reissue under § 1.633(h) shall:

(1) Identify the application for reissue.

(2) Certify that a complete copy of the file of the application for reissue has been served on all opponents.

(3) Show the patentability of all claims in, or proposed to be added to, the application for reissue *which correspond to each count* and apply the terms of the claims to the disclosure of the application for reissue; [18] *when necessary a moving applicant for reissue shall file with the motion an amendment adding any proposed claim to the application for reissue.*

(4) Be accompanied by a motion under § 1.633(f) requesting the benefit of the filing date of any earlier filed application, if benefit is desired.

The parties disagree as to whether Winter and Spaleck have complied with Rule 637(h)(3). Specifically, Fujita maintains that Winter and Spaleck did not comply with Rule 637(h)(3). *See* Findings 94-95, 100-101 and 107.

[3] There is no rule which authorizes the filing of a preliminary motion to add a claim to an "ordinary" application (as distinguished from a reissue application) and have the claim designated as *not* corresponding to the count. Likewise, there is no rule which authorizes the filing of a preliminary motion to add a claim to a reissue application and have the claim designated as *not* corresponding to the count. Hence, there is a long-standing practice of not permitting an applicant in an ordinary application to file a preliminary motion to add claims to its ordinary application for the purpose of having those claims designated as *not* corresponding to the count. *See, e.g., L'Esperance v. Nishimoto,* 18 USPQ2d 1534, 1537 (Bd. Pat. App. & Int. 1991). The board's practice is currently implemented by (1) dismissing preliminary motions seeking to add claims and to have those claims designated as *not* corresponding to the count *and* (2) not "entering" any amendment submitted with the preliminary motion (37 CFR § 1.615(a)). The rationale which supports the policy of not permitting an applicant to add a claim and have the claim designated as *not* corresponding to a count applies with equal force to claims in a reissue sought to be added to the interference.[19] Moreover, there is no express provision in Rule 637(h) which permits a patentee to discuss any non-original patent claim which the patentee believes should be designated as *not* corresponding to the count.[20] The provision of Rule 637(h)(3) which states "when necessary a moving applicant for reissue shall file with the motion an amendment adding any proposed claim to the application for reissue" would be subject to the limitations of Rule 633(c) and Rule 637(c), neither of which permit a preliminary motion to add a claim to be designated as not corresponding to the count. In fact, Rule 637(h)(3) refers only to claims which correspond to the count. Hence, Rule 637(h) should be construed to not authorize the addition of reissue applications to an interference when the reissue application contains non-original patent claims which the reissue applicant does not seek to have designated as corresponding to the count. A reissue applicant should not be able through the back door to do what every other applicant cannot do through the front door.

For the reasons given, we agree with Fujita that the Winter and Spaleck preliminary motions to add reissue applications should be dismissed because both Winter and Spaleck seek to add reissue applications with claims which they do not feel should be designated as corresponding to the count. According, Winter Preliminary Motion 3 and Spaleck Preliminary Motion 3 are *dismissed*.[21] Since

[18] With respect to the meaning of the language "[s]how the patentability of all claims * * * which correspond to * * * [the] count," *see* Notice of the Chief Administrative Patent Judge, "Interference Practice—Interference Rules Which Require a Part to "Show the Patentability" of a Claim," 1217 Off. Gaz. Pat. & Tm. Office 17 (Dec. 1, 1998).

[19] If a party could file a preliminary motion to have a claim, not previously considered by an examiner, designated as *not* corresponding to the count, then to grant the preliminary motion, the board is the first instance would have to determine that the claim is not directed to the same patentable invention as the count. The board would be in the business of rendering essentially advisory opinions which should not be binding on the examiner The examiner may, and is more likely to, know of additional art, not considered by the board, which might establish that the claim is directed to the same patentable invention as the count.

[20] A patentee filing a reissue and asking that the reissue be added to the interference may have to mention an original patent claim because that original patent claim may have been designated as *not* corresponding to the count when the interference was initially declared.

[21] We recognize that Winter and Spaleck filed their respective reissue applications to claim priority. *See State of Israel v. Brenner,* 273 F.Supp. 714, 155 USPQ 486 (D.D.C. 1967), *aff'd,* 400 F.2d 789, 158 USPQ 584 (D.C. Cir. 1968) (reissue may be filed to perfect claim for foreign priority not perfected during prosecution of application which matured into patent sought to be reissued). The claim for priority was necessary to

both preliminary motions are being dismissed, it is not necessary to reach, or express any views on the merits of, the issue of whether Winter 719 claims 7-12 and Spaleck 832 claims 5-10 cover subject matter which is the same patentable invention as the counts in the respective interferences.[22]

B.

[4] In light of the discussion in Part III-A, *supra*, we today announce the following practice. In the future we will *dismiss* any preliminary motion under Rule 633(h) which seeks to add a reissue application to an interference when the reissue application contains non-original patent claims which the reissue applicant does not seek to have designated as corresponding to a count. Our newly announced practice does not preclude a patentee in an interference from filing a reissue application. If the reissue application contains new claims which the reissue applicant does not seek to have designated as corresponding to the count, the reissue application will not be added to the interference.

C.

After the interference is over, the Winter and Spaleck reissue applications will come before the examiner for *ex parte* examination. One issue the examiner will have to consider is whether Winter 719 claims 7-12 and Spaleck 832 claims 5-10 are patentable. In particular, the examiner may have to determine whether the claims should be rejected as being unpatentable over the lost count and/or on the basis of the rationale of *In re Deckler*, 977 F.2d 1449, 24 USPQ2d 1448 (Fed. Cir. 1992).

The arguments presented by Fujita and the declaration of Dr. Tobin Marks are material to the patentability within the meaning of 37 CFR § 1.56. Accordingly, we recommend that Winter and Spaleck supply copies to the examiner in the Winter and Spaleck reissue files of all arguments made by Fujita and all evidence supplied by Fujita, including the declaration of Dr. Marks.[23]

IV.

Fujita Rule 635 motion to strike

Fujita has moved to strike Winter Reply 1 and Spaleck Reply 1. Much of what Fujita has to say about new arguments in the Winter and Spaleck replies has merit. For example, Fujita correctly notes that the replies do not follow the format required in the NOTICE DECLARING INTERFERENCE. *See* ¶ 26(c)(4) at page 21.[24] Failure to follow the format renders it difficult to determine whether a reply raises new issues.

In our opinion, Winter Preliminary Motion 1 and/or Spaleck Preliminary Motion 1 do not make out a *prima facie* case that there is no interference-in-fact. *Based on the content of the preliminary motions and the oral argument*, we have little, if any, doubt that Winter or Spaleck failed to sustain their burden of establishing no interference-in-fact. Hence, it was generally unnecessary for us to consider either Fujita's oppositions or the Winter or Spaleck replies.

However, we would be less than candid if we did not acknowledge having read Fujita's oppositions. A cursory review of Winter Reply 1 and Spaleck Reply 1 will show that numerous new arguments were made by Winter and Spaleck in their replies.

We have found it unnecessary to consider the replies with one exception. Fujita in its oppositions and Winter and Spaleck in their

support their effort to obtain benefit of the 208 Patent. Since Winter and Spaleck failed *on the merits* (i.e., Winter and Spaleck Preliminary Motions 2 have been denied), they do not need their reissue in these interferences to perfect their claim for benefit. Had we ruled otherwise on the benefit issue, we would have granted the motion to add the reissue applications contingent on Winter and Spaleck promptly cancelling Winter 719 claims 7-12 and Spaleck 832 claims 5-10.

[22] Nor do we feel that Winter and/or Spaleck necessarily had a full opportunity to develop on the merits the issue of whether Winter 719 claims 7-12 and Spaleck 832 claims 5-10 should correspond to the count. The question of who had the burden of proof in these interferences has never been clear and is contested by the parties. *See* Findings 110 and 111. If we had authority under the rules to reach the merits issue, we would be inclined to permit Winter and Spaleck to respond to Fujita's latest submission with cross-examination or declarations of their own witnesses or both.

[23] A third-party declaration is admissible in *ex parte* examination. *In re Reuter*, 670 F.2d 1015, 210 USPQ 249 (CCPA 1981) (third party affidavit admissible in ex parte PTO proceeding. We voice no opinion on the weight which should be given to Fujita's arguments and evidence with respect to the patentability of Winter 719 claims 7-12 and/or Spaleck 832 claims 5-10.

[24] We also note the following additional defects in the Winter and Spaleck replies. The replies presume the truth of statements made in the specification of the Winter and Spaleck patents despite the fact that the patents are not admissible to prove the truth of statements made therein. *See* NOTICE DECLARING INTERFERENCE, ¶ 41. Copies of the Winter and Spaleck patents were not made exhibits. *See* NOTICE DECLARING INTERFERENCE, ¶ 37.

replies have discussed the scope of, and the meaning of language in, Fujita claim 8. We have considered the Winter and Spaleck replies only to the extent that they take issue with Fujita's opposition with respect to the meaning of Fujita claim 8 and only to the extent that the replies rely on admissible evidence.[25] Otherwise, we have not found it necessary to consider Winter Reply 1 or Spaleck Reply 1.

We continue to be concerned with inappropriate replies being filed in interference cases. *See* Part 2-a. of *Nau v. Ohuchida*,[26] which states:

> It has long been the perception of most, if not all, of the administrative patent judges of this board that counsel routinely raise new arguments and present new evidence with replies. Presentation of new arguments and evidence with replies raise several concerns which the Trial Section had hoped to eliminate through requirements in the NOTICE DECLARING INTERFERENCE.
>
> One concern is whether a good faith effort was made in the first instance in filing a motion, including a preliminary motion. To this end, it is the practice of the Trial Section to consider a motion. If it finds that the motion fails to make out a *prima facie* case for relief, the motion may be denied without consideration of any opposition or reply. The Trial Section does not deem it fair to an opponent when a party "gets its licks in" for the first time at the reply stage after the opponent can no longer submit evidence and/or argument. In short, the Trial Section hopes to eliminate the unfair tactical advantage which can be gained through improper replies.
>
> Another concern is that improper replies make the decision-making process difficult. It is time-consuming to read a motion only to discover that the issue to be resolved is joined at the reply stage. Hence, new arguments and new evidence at the reply stage generally result in inefficient administration of justice, all contrary to the philosophy set out in 37 CFR § 1.601.
>
> The Trial Section's concern with replies is not a new development. At the time the "new" interferences rules were being considered, it was proposed to allow replies only for certain motions. Notice of Proposed Rulemaking, Patent Interference Proceedings, 49 Fed. Reg. 3766, 3776 (col. 3), 3793 (col. 2) (Jan. 30, 1984). As a result of comments received following the notice of proposed rulemaking, it was decided to permit replies in all instances. However, the following observation can be found in the Notice of Final Rule (emphasis added):
>
> > Another comment made at the hearing suggested that a reply to an opposition to a motion should be permitted as a matter of course. Upon consideration of the comment, it has been decided to authorize the filing of replies to opposition to all motions. Presently, replies are permitted as a matter of course only for oppositions to motions under 37 CFR 1.231 [1984]. Section 1.638(b), as changed, would permit the reply in every instance. The PTO over the years has received complaints concerning the inability of a party to file replies. The change being made in § 1.638(b) will be reviewed sometime in the future to determine whether authorizing replies is helpful to the Board and/or whether undue delay in resolving interference occurs because replies are filed. *Moreover, the PTO will make a judgment on whether "new issues" are being raised as a matter of course in replies. It can thus be seen that the change in authorizing replies may be considered experimental and could be changed in the future if found to be counter-productive or inconsistent with the objective of resolving interferences in a relatively prompt manner* (emphasis added).
>
> Notice of Final Rule, Patent Interference Proceedings, 49 Fed. Reg. 48416, 48442 (col. 3) (Dec. 12, 1984). The Trial Section has gone out of its way to eliminate the raising of new arguments in replies. *See* Paragraph 31 of the NOTICE DECLARING INTERFERENCE. If the interference bar wishes to retain its option of being able to file replies, then it should make every effort to avoid raising improper new arguments and presenting improper new evidence with replies. Quite frankly, if the efforts of the Trial Section are not successful, we see the next step as a proposal to amend the rules to permit a reply only with leave of an administrative patent judge.
>
> [5] The Trial Section feels that one more warning is in order to all concerned that we will strictly enforce the reply brief practice as of the date this opinion is published on the PTO Web Page or elsewhere. Whatever may have been the expectation prior to that publication, we feel we are left with little choice. Moreover, any reply which does not use the format required by ¶ 26(c), including ¶ 26(c)(4), of the NOTICE DECLARING INTERFERENCE will be returned. We take a final warning step in what we perceive to be the same spirit in which the Federal

[25] *See* n.12, *supra*.

[26] http//:www.uspto.gov/web/offices/dcom/bpai/its/104258.pdf.

Circuit recently has taken steps to curb the raising of arguments before that court which are inconsistent with arguments made to a district court. *See Key Pharmaceuticals v. Hercon Laboratories Corp.*, 161 F.3d 709, 715-16, 48 USPQ2d 1911, 1916 (Fed. Cir. 1998) and *Hockerson-Halberstadt v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999), which states:

> As a preliminary matter, this court decides that HHI has not waived the claim construction it advances on appeal. The recent case of *Key Pharmaceuticals v. Hercon Laboratories Corp.*, 161 F.3d 709, 48 USPQ2d (BNA) 1911 (Fed. Cir. 1998) presented a similar issue. In *Key*, Hercon challenged on appeal the very claim construction it convinced the trial court to adopt. Finding Hercon's position "highly questionable," this court noted:
>
> Ordinarily, doctrines of estoppel, waiver, invited error, or the like would prohibit a party from asserting as "error" a position that it had advocated at the trial.
>
> *Id.* at 715. However, because this court had not issued an opinion publicly condemning this behavior and because *Key* did not object, the *Key* court exercised an "abundance of fairness" and revisited the claim construction issue. *See id.* at 715-16.
>
> The parties completed briefing in the case at bar on November 19, 1998, about a week before this court's November 25, 1998 decision in *Key*. Thus, the present parties, as in *Key*, did not have the benefit of an opinion of this court noting the impropriety of switching claim constructions on appeal. Accordingly, this court again exercises an abundance of fairness and reviews the correctness of the district court's claim construction.

We deem it appropriate to exercise the same abundance of fairness in this case that the Federal Circuit exercised in *Key* and *Hockerson-Halberstadt*. We do not intend to be so charitable once this opinion appears on the PTO Web Page or is otherwise published.

For the reasons given, we exercise our discretion by declining to strike Winter Reply 1 and Spaleck Reply 1. Fujita's Rule 635 Motion to strike is *denied*.

V.

The Winter and Spaleck Rule 635 motions to leave to file belated preliminary motions

Winter and Spaleck seek to file belated preliminary motions to challenge the patentability of Fujita's claims under the first and second paragraphs of 35 U.S.C. § 112. Winter and Spaleck argue that there is good cause for not having earlier filed the preliminary motions. We disagree and therefore the Winter and Spaleck Rule 635 motions are *denied*.

Winter and Spaleck are said to have been surprised by a Fujita construction given Fujita claim 8 in a paper filed by Fujita on 25 May 1999 (283 Paper 50; 284 Paper 51). By virtue of being surprised, Winter and Spaleck say they could not have earlier filed a preliminary motion attacking the patentability of Fujita claim 8 under 35 U.S.C. § 112. But, it is absolutely plain on this record that as early as the filing of Winter Reply 1 and Spaleck Reply 1 on 17 May 1999 in response to Fujita oppositions filed 16 April 1999 that there was a disagreement as to the meaning of Fujita claim 8. Moreover, both the examiner (FEx 2004, page 3—"the instant [Fujita] claims read on compounds as well as the catalyst composition") and the NOTICE DECLARING INTERFERENCE, page 43 (Fujita claim 16—which depends from Fujita claim 8—is directed to a catalyst which is a compound) construed Fujita claim 8 as being directed to a compound. It appears that Winter and Spaleck have never agreed with the examiner's construction of Fujita claim 8 or the construction placed on the Fujita claims in the NOTICE DECLARING INTERFERENCE.

The issues Winter and Spaleck seek to raise in a belated preliminary motion are manifestly afterthoughts which come too late in this interference.

VI.

Fujita Rule 635 motion 2 to file declaration

Fujita has moved to file and have considered on the merits a declaration of Dr. Tobin Marks. *See* Findings 56(11) and 113. Inasmuch as we have dismissed Winter Preliminary Motion 3 and Spaleck Preliminary Motion 3, as requested by Fujita, we do not reach the remaining grounds of Fujita for opposing the preliminary motions. Accordingly, there is no need to consider the Marks declaration. Fujita's Rule 635 Motion 2 is therefore *dismissed*.

VII.

Priority of invention

Fujita is entitled to an earlier benefit date. There will be no priority testimony since the parties rely on their filing dates in the respective preliminary statements. Accordingly, Fujita is entitled to a judgment on the issue of priority in its favor in both interferences.

A separate judgment will be entered in each interference.

FINAL JUDGMENT: INTERFERENCE NO. 104,283

Upon consideration of the MEMORANDUM IN SUPPORT OF FINAL JUDGMENTS (Paper 73), and for the reasons given therein, it is

ORDERED that Winter Preliminary Motion 1 is *denied.*

FURTHER ORDERED that Winter Preliminary Motion 2 is *denied.*

FURTHER ORDERED that Winter Preliminary Motion 3 is *dismissed.*

FURTHER ORDERED that Fujita Rule 635 Motion to strike Winter Reply 1 is *denied.*

FURTHER ORDERED that Winter Rule 635 Motion for leave to file Winter Preliminary Motion 4 is *denied.*

FURTHER ORDERED that Fujita Rule 635 Motion 2 for leave to file a declaration of Dr. Tobin Marks is *dismissed.*

FURTHER ORDERED that judgment on priority as to Count 1, the sole count in the interference, is awarded against junior party Andreas Winter, Frank Kueber, Walter Spaleck, Herbert Riepl, Wolfgang A. Hermann, Volker Dolle and Juergen Rohrmann.

FURTHER ORDERED that judgment on priority as to Count 1 is awarded in favor of senior party Takashi Fujita, Toshihiko Sugano and Hideshi Uchino.

FURTHER ORDERED that, on the record before the Board of Patent Appeals and Interferences, senior party Takashi Fujita, Toshihiko Sugano and Hideshi Uchino is entitled to a patent containing claims 8-14 and 16 (corresponding to Count 1) of application 08/678,686, filed 11 July 1996.

FURTHER ORDERED that junior party Andreas Winter, Frank Kueber, Walter Spaleck, Herbert Riepl, Wolfgang A. Hermann, Volker Dolle and Juergen Rohrmann is not entitled to a patent containing claims 1-6 (corresponding to Count 1) of U.S. Patent 5,455,365, granted 3 October 1995, based on application 08/101,408, filed 3 August 1993.

FURTHER ORDERED that if there is a settlement agreement, attention is directed to 35 U.S.C. § 135(c) and 37 CFR § 1.661.

FINAL JUDGMENT: INTERFERENCE NO. 104,284

Upon consideration of the MEMORANDUM IN SUPPORT OF FINAL JUDGMENTS (Paper 74), and for the reasons given therein, it is

ORDERED that Spaleck Preliminary Motion 1 is *denied.*

FURTHER ORDERED that Spaleck Preliminary Motion 2 is *denied.*

FURTHER ORDERED that Spaleck Preliminary Motion 3 is *dismissed.*

FURTHER ORDERED that Fujita Rule 635 Motion to strike Winter Reply 1 is *denied.*

FURTHER ORDERED that Winter Rule 635 Motion for leave to file Winter Preliminary Motion 4 is *denied.*

FURTHER ORDERED that Fujita Rule 635 Motion 2 for leave to file a declaration of Dr. Tobin Marks is *dismissed.*

FURTHER ORDERED that judgment on priority as to Count 1, the sole count in the interference, is awarded against junior party Walter Spaleck, Juergen Rohrmann and Martin Antberg.

FURTHER ORDERED that judgment on priority as to Count 1 is awarded in favor of senior party Takashi Fujita, Toshihiko Sugano and Hideshi Uchino.

FURTHER ORDERED that, on the record before the Board of Patent Appeals and Interferences, senior party Takashi Fujita, Toshihiko Sugano and Hideshi Uchino is entitled to a patent containing claims 8-13, 15 and 17-18 (corresponding to Count 1) of application 08/678,686, filed 11 July 1996.

FURTHER ORDERED that junior party Walter Spaleck, Juergen Rohrmann and Martin Antberg is not entitled to a patent containing claims 1-4 (corresponding to Count 1) of U.S. Patent 5,329,033, granted 12 July 1994, based on application 08/142,512, filed 25 October 1993.

FURTHER ORDERED that if there is a settlement agreement, attention is directed to 35 U.S.C. § 135(c) and 37 CFR § 1.661.

Abbreviations Used in Opinion

283 Paper	Paper number of paper in the file of Interference 104,283, Winter v. Fujita
284 Paper	Paper number of paper in the file of Interference 104,284, Spaleck v. Fujita
FEx	Fujita exhibit

Fujita	The inventive entity named in application 08/678,686, filed 11 July 1996 which is involved in both Interference 104,283 and Interference 104, 284
Patent 208	U.S. Patent 5,276,208, issued 4 January 1994
PTO	Patent and Trademark Office
SEx	Spaleck exhibit
Spaleck	The inventive entity named in U.S. Patent 5,329,033 which is involved in Interference 104,284
Spaleck 832	Spaleck application 09/253,832, filed 19 February 1999 seeking to reissue Spaleck U.S. Patent 5,329,033 which is involved in Interference 104,284
Tr x:y-z	Page x, lines y to z of the transcript of oral argument on 29 September 1999
WEx	Winter exhibit
Winter	The inventive entity named in U.S. Patent 5,455,365 which is involved in Interference 104,283
Winter 719	Winter application 09/252,719, filed 19 February 1999 seeking to reissue Winter U.S. Patent 5,455,365 which is involved in Interference 104,283

U.S. Court of Appeals
Second Circuit

Attia v. Society of the New York Hospital

No. 98-7797

Decided December 27, 1999

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1. Non-copyrightable matter — Ideas and systems (§211.05)

Generalized notions of where to place functional elements in plan for accomplishment of architectural or engineering project, as well as traffic routing, methods of construction, and principles of engineering, are "ideas" that may be taken and utilized by successor without violating copyright of original "author" or designer, but infringement may be found if copier appropriates not only those ideas but also author's personal expression of them.

2. Non-copyrightable matter — Ideas and systems (§211.05)

Rights in copyright; infringement — Right to reproduction — Access, copying, and substantial similarity — Works not similar (§213.0503.05)

Defendants' schematic design drawings do not infringe copyright in plaintiff's booklets containing ideas on how to extend hospital over roadway, since plaintiff's drawings are highly preliminary and generalized, and describe plaintiff's proposed design at very general level of abstraction, whereas defendants' drawings constitute detailed expression of how to extend hospital and restructure existing buildings, and since any similarities between plaintiff's drawings and defendants' plans do not go beyond concepts and ideas contained in plaintiff's drawings; even if it is assumed that ideas allegedly taken are powerful, dynamic ideas of immense value to successful enlargement of hospital, power of idea does not improve creator's right to prevent copying.

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